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A case study of the dual roles of an exemplary physical education teacher/coach : an ecological comparison.

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A CASE STUDY OF THE DUAL ROLES OF AN EXEMPLARY PHYSICAL EDUCATION TEACHER/COACH: AN ECOLOGICAL COMPARISION

A Dissertation Presented

By

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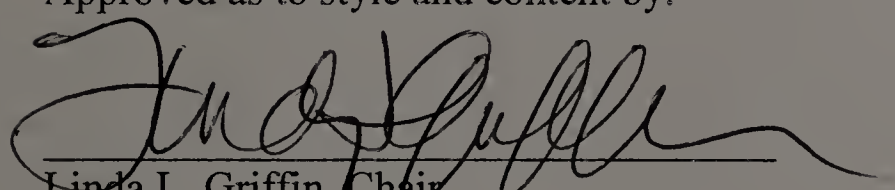

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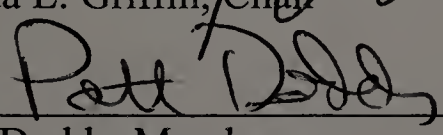

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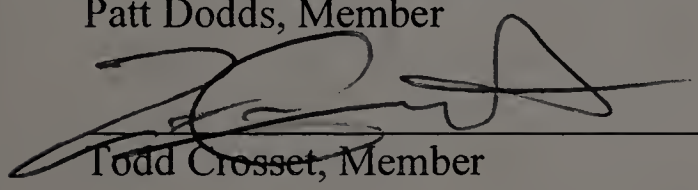

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ABSTRACT

A CASE STUDY OF THE DUAL ROLES OF AN EXEMPLARY PHYSICAL EDUCATION TEACHER/COACH: AN ECOLOGICAL COMPARISION

MAY 2004

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An ecological perspective has been utilized to understand the teaching-learning context in physical education and sport settings, yet few studies have systematically studied the teacher/coach in their dual role context teaching and coaching (Hastie & Siedentop, 1999). The purpose of this study was twofold. First, to examine the work of an exemplary physical education teacher/coach teaching soccer in physical education and coaching soccer in sport from Doyle's (1977) ecological perspective. Specifically, to understand the similarities and difference of the program of action (PoA), during lesson and practice sessions. Second to examine, from Callero's (1994) resource perspective of role, how dual role responsibilities influenced the work of a physical education teacher/coach. Participants included Tom, a 34-year veteran physical education teacher/coach and his physical education class (N=14), and varsity boy's soccer team (N=23). Data were collected at 15 physical education classes and 31 soccer practices using qualitative techniques (e.g., narrative field notes, in-depth participant interviews). Three formal semi-structured 90 minute interviews were conducted with the

teacher/coach to explore his background, perceptions and beliefs about teaching and coaching, and his work as a dual role professional. Semi-structured 30-minute student/athlete interviews were conducted with seven students and 21 athletes and focused on their experiences in sport and physical education with Tom. Data were analyzed inductively using a constant comparison method. Findings indicate that for Tom there was a similarity and compatibility of teaching physical education and coaching sport based on how Tom claimed the teaching and coaching role. Second, reverence among student/athletes and Tom was a powerful resource Tom accessed through the teaching and coaching role, which facilitated relationship building and contributed to a positive learning environment. Finally, Tom structured the learning environments in physical education and sport with robust PoAs, which included a strong primary learning vector. Tom used many appropriate pedagogical practices in both physical education and sport, such as effective rules, routines, expectations, and strong content development through the four games stages (Rink, 1998) which contributed to the robustness of the PoA. This study was an important step in the systematic examination of the practices of exemplary physical education teacher/coaches.

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CHAPTER 1

INTRODUCTION

The physical education teacher/coach has played a prominent role in American secondary schools over the last 50 years (Sage, 1989a). Such prominence is often defined solely by success in the sport setting as a coach. In the U.S., interscholastic sport is often coached by physical education teachers (i.e., teacher/coaches) who are required or choose to coach sport as an extra curricular activity in addition to their teaching responsibilities (Spencer, 1999). As a consequence, some physical education teachers function as dual role professionals (i.e., teacher/coaches). In spite of the time demands, coaching sport provides some physical education teacher/coaches with extra rewards, recognition, and satisfaction for their role as a coach, which they do not often receive as physical education teachers (Stroot, Collier, O'Sullivan & England, 1994).

Although sport and physical education share common content, the learning environments of physical education and sport pose unique challenges for physical education teacher/coaches (Bain, 1978; Chu, 1981; Locke & Massengale, 1978; Rupert & Buschner, 1989). For example, in physical education students are often heterogeneously grouped and significant differences in skill ability can result making it more difficult for teachers to design instructional tasks. A unique challenge faced by coaches in sport may include the pressure to win as a condition for employment. Since both teaching and coaching, when done well, require a complex set of actions, and significant attention and devotion, some teacher/coaches find it difficult to meet the challenges that result from this dual role.

Research shows that dual role professionals respond in a variety of ways to their dual roles. Some teacher/coaches struggle to meet the challenges of the dual roles and experience role conflicts (Bain, 1978; Chu, 1978, 1984; Locke & Massengale, 1978); other teacher/coaches have found that occupying dual roles leads to a sense of satisfaction and fulfillment (Sage, 1989b; Stroot et al., 1994). Satisfaction may result when multiple role takers learn ways to balance their different role obligations so that the gratifications can outweigh the stresses involved as one group of teacher-mothers found (Claesson & Brice, 1989). Still other dual role professionals use their roles to aid in the construction of social action, and use roles to accomplish pragmatic interactive goals of the community (i.e., resource perspective) (Callero. 1994). For example the physical education teacher/coach may use his or her status in the community as a coach to secure support for quality daily physical education. The perspective of role as a resource may help researchers further understand how physical education teacher/coaches can use their roles in a beneficial manner within the context of schools.

Doyle's (1979a, 1986b) ecological paradigm provides a theoretical perspective to examine the work of physical education teacher/coaches at the class/practice level. From an ecological perspective, the connection between teaching/coaching and learning is a set of interrelated task systems (i.e., instructional, managerial, social, and accountability) in which changes in one system are likely to have distinct repercussions for behavior in other systems (Doyle, 1979a, 1979b; Hastie & Siedentop, 1999; Son, 1989). The ecological perspective provides a useful lens to examine the interaction among people (i.e., student/athlete and teacher/coach) and their environment (i.e., classroom or practice setting) as these naturally develop around a series of tasks to be accomplished (Siedentop

& Tannehill, 2000; Son, 1989). This perspective captures the dynamic nature of the classroom or practice context and the dual directional influence among teacher/coach and student/athlete behaviors.

The features and organization of a classroom point to the complex nature of the teaching and learning environment. A central premise of the ecological perspective is that meaning, function, and the effect of discrete behaviors are shaped by the larger contexts of activities, lessons, and class sessions (Doyle, 1986b; Gump, 1967). The task systems model integrates academic, managerial, and social dimensions of classroom life in ways that highlight how academic work is affected by classroom events (Doyle & Carter, 1984).

Recently, an important and useful concept that researchers have explored is the program of action (PoA) another construct within the ecological perspective. The simultaneous and ongoing interrelationships among the task systems that compose the classroom ecology form the PoA in both classroom and practice settings. The PoA represents the zone of activity where issues of subject matter and management come together. There is a specific direction, energy, and momentum to the PoA (Doyle, 1986b). The PoA encompasses the "position and sequencing of content and management within lessons" (Hastie & Siedentop, 1999, p. 12). This is defined by "both the rules for social participation and the demands of academic work" (Doyle, 1986b, p. 424). The PoA contributes in the determination of appropriate behaviors for students during different instructional contexts as behavioral boundaries for tasks are established (Doyle, 1986b; Hastie & Siedentop, 1999).

Through the examination of the PoA the main flow of classroom and practice events, and the goals the teacher/coach and student/athlete have for the learning environments can be explored. To date only a few researchers have explored the PoA in physical education (Hastie, 2000; Stroot et al., 1994; Supaporn, Dodds & Griffin, 2003; Ward, 1999) and sport (Griffin, Siedentop & Tannehill, 1998). This small body of literature reveals that secondary physical education programs that follow a specific instructional model (e.g., sport education), can produce robust (i.e., learning) PoAs. Casual or "no sweat" PoAs were identified in secondary physical education programs that followed a more traditional multi-activity approach (Supaporn et al., 2003; Ward, 1999). Also, the one study conducted in the sport context revealed a robust PoA. Researchers have yet to examine the PoA in both sport and physical education as developed by the same teacher/coach.

Salient to the ecology and the PoA operating in physical education and sport is an examination of how the dual role responsibilities of teacher/coaches influence behaviors in the different contexts. Examining the direction of influence of the dual role on the ecologies and PoAs that operate in both settings will facilitate an increased understanding of each context and the work of the teacher/coach as a dual role professional.

Purpose of the Study

The purpose of this qualitative case study was threefold. First, it was to examine the influence of context on an exemplary dual role professional teaching physical education and coaching sport. Second, it was to examine the PoA developed in both sport and physical education by the same teacher/coach in the same activity. Third, it was to understand how an exemplary teacher/coach managed the complexity of the dual role.

Research Questions

1. What were the tasks and task systems operating in physical education and interscholastic sport?
    a. How was order achieved in the sport and physical education context?
    b. How was social participation structured in the sport and physical education context?
    c. How was learning structured in the sport and physical education context?
2. How did the program of action (PoA) develop in sport and physical education?
    a. What factors influenced the PoA? (e.g., context, beliefs, PCK)
    b. Why did the PoA develop in this manner?
    c. How was the PoA in sport and physical education situated within the larger school context?
3. How did an effective teacher/coach manage dual role responsibilities?

Significance of the Study

This study was significant for several reasons. First, in the last fifteen years research has offered a limited, technical view of the work of physical education teacher/coaches in sport and physical education (Jones, Potrac & Ramalli, 1999; Rupert & Buschner, 1989). Researchers, focused on coaching (of which physical education teacher/coaches are a subset), have recently acknowledged that sport performance is an inexact science and that the coaching role goes beyond that of technical expert (Jones, 2000; Lyle, 1999a). The need to examine the multifaceted relationship among coach and athlete to more fully understand the coaching process has growing support in the coaching research community (Lyle, 1999a, 1999b; Potrac, Brewer, Jones, Armour, &

Hoff, 2000; Abraham & Collins, 1998). One aspect of understanding the coaching process of teacher/coaches is an examination of dual role responsibilities.

The present study focused on *in situ* teaching and coaching behaviors (answering the call made by Cote et al., 1995 and again by Jones, Armour, & Potrac, 2002) and helped explore the complex reality within which physical education teacher/coaches function. If researchers examine dual role professionals in physical education and sport, then findings may be used to more fully understand the complexity of this work.

Second, although some research has been completed from the ecological perspective that examined the PoA in physical education, fewer studies have been conducted in the coaching context that examined the PoA (Griffin et al., 1998; Pagnano, 2002). The present study of an exemplary teacher/coach, engaged in the same content (i.e., soccer) in both settings, revealed differences that cannot be attributed solely to teacher effects, but rather the unique context and specific structure of the PoA in each setting. The present study adds to the literature as it identified robust PoAs in physical education and sport. An exemplary secondary physical education teacher/coach had not been studied in both physical education and interscholastic sport with the same subject matter focus. Thus, differences in previous studies could be attributed to subject matter focus, students' level of maturity, peer influences, or teacher expertise (Doyle, 1986b).

Third, this study extended the range of contexts studied from an ecological perspective (i.e., exemplary high school teacher/coach in physical education and sport) and identified a robust PoA in physical education and in interscholastic sport. An understanding of how the PoA was enacted and the conditions that contributed to the PoA functioning in sport and physical education will help move research across the boundary

separating classrooms from the larger school context (Doyle, 1986b). Physical education and sport are clearly influenced by the larger context within which they are situated, but previously few researchers have documented how, when or why these influences occur (Doyle, 1986b).

Finally, this research has implications for teacher education. If the context of teaching physical education and coaching interscholastic sport is better understood, then it might be possible to design preservice teacher education programs to better meet the needs of physical education teacher/coaches. Currently, most physical education teacher education programs focus almost exclusively on teacher education. A shift in focus to include specific preparation for teacher/coaches may help these dual role professionals thrive in the workplace.

CHAPTER 2

REVIEW OF LITERATURE

The study of teacher/coaches has been the subject of much research; nevertheless, there is a paucity of research that examines physical education teacher/coaches in the context of teaching physical education and coaching sport. Doyle's (1977, 1986b) ecological paradigm provides a theoretical framework to examine the work of physical education teacher/coaches as dual role professionals in context.

Extensive work has been completed to identify the tasks and task systems operating in sport and physical education (Hastie & Siedentop, 1999). A newer construct within the ecological perspective that needs further investigation is the PoA. The PoA represents the zone of activity where issues of subject matter, management, and rules for social participation come together (Doyle, 1986b). Examination of the PoA in physical education and sport represents the agenda that the teacher/coach and students/athletes have in each context. Essentially, the PoA represents the intensity (robust to casual) and momentum of learning. The dynamic nature of a classroom/practice setting, the type of academic/practice task, and the organization of the class/practice are several factors that contribute to the PoA (Doyle, 1986b; Hastie & Siedentop, 1999).

Researchers have documented that physical education teacher/coaches operate with various pedagogical behaviors in each context (Jones et al., 1999; Pagnano, 2002; Rupert & Buschner, 1989). How and why pedagogical differences occur in the teaching and coaching practices of dual role professionals remains speculative (Jones et al., 1999).

This chapter will address relevant aspects of teaching physical education and coaching interscholastic sport in two sections: (A) Background on sport and physical

education and on dual role professionals will be explored. This examination will include the goals of sport and physical education in the U.S., the relationship between sport and physical education in the U.S., and a description of characteristics of physical education teacher/coaches as dual role professionals. (B) The ecological perspective will be presented to examine the similarities and differences between the context of teaching physical education and coaching sport. This in-depth examination will include the classroom context, specific aspects of the ecological perspective such as the PoA and tasks and task systems.

Background of Physical Education and Sport

Although agreement about the purpose of physical education is difficult for physical education professionals to achieve, the idea that interscholastic sport and physical education are the same is met with almost universal disapproval. This point of contention is interesting, as sport is a large part of what physical education has been teaching since the end of World War II. When sport is used to describe physical education, educators claim, the unique educational mission of physical education is absent (Hoolihan, in press).

Historically, the attitude in the U.S. is that physical education programs are second in importance to interscholastic sport (Hutchinson, 1990; Lewis, 1969; Siedentop, 1980), a position I do not embrace. Changes in the goals of physical education and sport explain this relationship. Early high school teams were organized through student initiative and were largely ignored by faculty and administration (Sage, 1989a). Prior to 1906 interscholastic sports were viewed as a form of entertainment and physical education was considered a "producer of health" (Lewis, 1969). From 1906-1916 as the

U.S. became an industrialized nation and immigrant populations grew, educators began to embrace sport as a worthwhile forum for educating young people for the industrialized workplace. Sport began to receive recognition as an educational medium for character and citizenship development (Sage, 1989). Sport became a forum for new immigrants to learn the skills (e.g., teamwork) and attitudes (e.g., giving all for the team) needed for success in the workplace (Miracle & Rees, 1994).

By the 1920's control of high school sport shifted from students to school authorities and physical education teachers were assigned the coaching duties (Sage, 1989). This happened at the same time that the physical education curriculum was transforming from the gymnastics and calisthenics emphasis of the 19th century and was replaced by a sport and games curriculum (Sage, 1989a). Physical education and sport were then merged and the educational values of sport were adopted into physical education. In addition, sport was credited with teaching many of the goals of physical education (e.g., fair play, learning to work together). Eventually, the goal of physical education changed from health improvement to sport instruction. The goal of physical education programs became "sports for all," a goal that served the interest of athletics as physical education introduced students to the skills needed for interscholastic sport (Hutchinson, 1990; Lewis, 1969). Today, many secondary physical education programs continue to emphasize team sport activities (Napper-Owens, Kovar, Ermler, & Mehrhof, 1999).

Debate continues today on the place and educational relevance of interscholastic sport programs. This debate is often entered into with extravagated claims of the benefits and problems associated with interscholastic sport programs (Coakley, 1998; Gerdy,

2000; Miracle & Rees, 1994; Stroll & Beller, 2000). The model for high school interscholastic sport in America is a school-based varsity model. This model of sport excludes more athletes at higher levels of competition. Membership on interscholastic sport teams has been associated with higher grade point averages for athletes, positive attitudes toward school, and as a source of status that contributes to a positive educational experience (Miracle & Rees, 1994). Critics of interscholastic sport emphasize shocking cases of excess and abuse, from grade inflation to criminal behavior of star athletes that is overlooked by local law enforcement officials, and claims that interscholastic sport distracts attention from academic activities (Coakley, 1998; Gerdy, 2000; Miracle & Rees, 1994).

Despite their different contested nature, physical education and interscholastic sport remain intimately connected. Some professionals and laypeople view physical education as the building block of the sport development continuum where sport stars of the future are introduced to the fundamental skills of sport (Siedentop, 1972). Others clearly see physical education as a means to promote an active, healthy lifestyle, or to teach social responsibility (Siedentop & Tannehill, 2000). As youth sport has expanded since the 1980's, sports themselves have taken on more pedagogically and developmentally appropriate and ethically defensible practice. It is now accepted that a positive youth sport experience must include many of the same principles that underpin quality school physical education programs (Hollihan, in press).

This is not to suggest that sport and physical education share all the same educational aims, although common ground exists. The common ground, however, includes content, practices, and professionals, as some physical educators are also

coaches. In addition, professional organizations such as the American Alliance for Health, Physical Education, Recreation and Dance (AAHPERD) and the National Association for Sport and Physical Education (NASPE) are organized to support the development of both teachers and coaches.

To understand the ecologies and the PoAs of sport and physical education it is essential to examine their contextual similarities and differences. Context is significant to understand the ecology because certain features of the environment (e.g., publicness) can create pressures that shape the task of teaching or coaching (Doyle, 1986b). This examination of sport and physical education and the dual role professionals who teach and coach will cover three areas that include (a) goals of sport and physical education in the U.S., (b) description of physical education teacher/coaches, and (c) comparisons of behaviors of teacher/coaches in each context.

Meanings of Physical Education and Sport

To facilitate an understanding of physical education and sport it is important to examine the meanings of each of these terms and to explain the relationship between them. It is necessary to distinguish between physical education and sport as they are often used interchangeably, yet represent distinct learning environments. I do not intend to represent the full range of perspectives in the meaning of these terms; but, rather, meanings that represent my perspective. This will serve the reader by foregrounding my potential biases and clarifying my position in relationship to the contextual similarities and differences associated with physical education and sport.

Physical education. The meaning of physical education that I selected represents a recent shift in my thinking about the purpose of physical education. Siedentop (1972)

provides a definition that reveals the meaning of physical education in relationship to play. The construct of play is useful to understand the meaning of both physical education and interscholastic sport because in both settings an individual plays. Therefore, I will present a description of play to elucidate the meanings I associate with physical education.

Although an extensive body of literature exists that examines classifications, theories, and functions of play and games from various perspectives that include historical, cultural and psychological, I have limited my focus to two major constructs from the play literature (Caillois, 1961; Huizinga, 1950; Siedentop, 2004; Weinsheimer, 1985). The two constructs include a meaning of play and the games continuum, which can both be used to understand the meanings associated with physical education and sport. Awareness of the importance of play in the life of a child has grown in importance as educators recognized that playful behavior is often motivated by an intense desire to learn that is accompanied by positive feelings of enjoyment, and much learning (Siedentop, 2004).

First, when a person is at play, he/she is by definition engaged in an experience, which is inherently meaningful. Play is an irreducible form of behavior seen in all animal life that finds its fullest expression in human behavior. Play is further a mode of behavior that is fundamental to some of life's most meaningful moments (e.g., physical grace, psychological ease, and personal integrity) (Siedentop, 2004). Play by definition must be: (a) free: it is voluntarily entered into, (b) uncertain: the results and course of action not predetermined, (c) economically unproductive: wealth not produced, (d) regulated: new laws established which alone count, (e) fictive: accompanied by make-believe, and (f)

separate: bound within limits of time and space, defined and fixed in advance (Caillois, 1961).

Play often means to have fun, and fun on some level is an important aim of physical education (Siedentop, 1972). Physical education provides opportunity to play and play provides an opportunity to loose ourselves. To play is to sacrifice freedom and accept limits. We lose, first of all, our relation to the world of earnest, of serious purpose; but we do so by acquiring a different seriousness. When at play, games are the focus of our play. When we play, we choose not only to work but choose to play some particular game (e.g., soccer, basketball, tennis). Each game has a specific spirit of play that is set aside and closed off from exit and intrusion (Weinsheimer, 1985). When we assume the spirit of play, we take on a task that transforms our own aims into the ends of the game (e.g., to play the game well). Transformation occurs through role playing.

Gadamer (1975) explained that to play something is also to represent it. Each game has its unique set of tasks and roles to be played. When we play, the game assigns us a task and we present ourselves in specific roles (e.g., goalie in soccer). In this way a game allows us to loose ourselves, to play, in something set aside from the seriousness of life. Yet, "for a game to be genuine it must be taken seriously. One can not toy with or play with a game if it is not to be a real game. One cannot behave as if it is serious; it must be so" (Weinsheimer, J. 1985, p. 102). The game takes over the consciousness of the players. The subject of the game is not the player; rather the players are merely the way the play comes into presentation. In a game the subject is changed; as a player, they no longer act naturally, as themselves (Gadamer, 1975).

The allure of play, the fascination it exercises, consists precisely in the fact that the game becomes master over the players. There is always some obstacle that prevents immediate success, some opponent, some rule, and some boundary of space or time that overrules personal preference and limits freedom (Weinsheimer, 1985). Game play is thus a microcosm of life in a democracy. We do not want to eliminate these boundaries. Being limited is a condition of playing at all. But no game also ever determines exactly how it is going to be played either. Learning about freedom (voluntary activity) is a special intrinsic reward from our participation in play. We are free to choose play, or free to choose not to play. Our bodily beings are unconstrained. This freedom, although brief, teaches humans they can be self-governing and independent beings (Kilbourne, 2001).

Second, under the domain of play, games have been divided into four main rubrics that depend on the role that competition, chance, simulation, or vertigo dominate in the game. These are called agon, alea, mimicry, and ilinx, respectively. These designations do not cover all types of play. Rather, each of the four designations contains games of the same kind that are rank ordered in progression. Games in each of the four designations can be placed on a continuum according to the degree of spontaneity, orderliness, and regulation present in the game (see Figure 1) (Caillois, 1961). The term paidia represents one end of the continuum that is characterized by spontaneity and diversion; the kind of behavior associated with child's play. The other end of the continuum is characterized by contrivance, calculation, and subordination to rules, and is represented in the term ludus.

This continuum does not represent paidia as more playful, or in anyway having more value, than the desire for difficulty, which is ludus. As games change from paidia to

ludus, an ever-increasing amount of skill, effort, patience, and ingenuity is required in order to be a successful player. For example, a golfer must master the rules, etiquette, skills, and strategies that are imposed on him/her to play in a golf match. It is the mastery of these ludus factors that the golfer finds meaningful. Golf, however can be played across the games continuum as modified match rules (e.g., best ball) and informal practice can be viewed as playful. Understanding ludus is a key concept of play education, as it requires education to lead to the mastery and acquisition of special skills. From this perspective play can then be viewed as a valid education concern (Siedentop, 1972).

If physical education foregrounds play as its aim, rather than the development of physical, mental, emotional, and social health through the medium of physical activities, the activities of physical education become intrinsically valuable because they represent institutionalized forms of play, and are therefore fundamentally important sources of meaning (Siedentop, 1972). Siedentop (1972) argues that the construct of play features the uniquely educational value inherent in our subject matter. If any concomitant values accrue (e.g., physical, social, emotional) it is because the student played. This notion of physical education requires that we take play seriously and that we develop theories and programs consistent with the overriding human importance of an active play life.

A current curriculum and instruction model that grew from the play education approach is Sport Education (Siedentop, 1994). The rationale for sport education rests on three assumptions. First, sport derives from play and sport is an institutionalized form of competitive motor play. Second, sport is an important part of our culture and occupies an important role in determining the health and vitality of the culture. Third, if sport is a

higher form of play and is important to the health and vitality of the culture, then it should be the subject matter of physical education. The clear intent is that students will have the opportunity to improve their ability to play sports and their attitude toward sport participation (Siedentop, 1994).

Thus, for the purpose of this paper the definition of a physically educated person is as follows: "...one who has learned to play and appreciate sport and physical activity more completely, to coordinate and manage their own sport and fitness experience, and to accept individual responsibility, and demonstrate group membership skills" (Siedentop, 1994). To achieve these outcomes physical education must include high student engagement levels, and place students in positions where they learn self-management and do not consider the need to negotiate with teachers for lower expectations (Hastie, 2000).

Sport. Sport can be thought of as "playful competition," as a sophisticated form of play that promotes the maturation and social competence of individuals in a culture (Siedentop, Mand, & Taggart, 1986). Interscholastic sport is more likely than physical education to be (a) voluntary, (b) selective (i.e., not everyone is chosen), (c) organized into seasons with competitions, (d) toward a collective team outcome (e.g., winning league title), and (f) played for external rewards (e.g., status, rite of passage, public recognition, trophies). For this paper *sport* will be defined as (Coakley, 1998, pg. 19).

> ...institutionalized competitive activities that involve vigorous physical exertion or the use of relatively complex physical skills by individuals whose participation is motivated by a combination of personal enjoyment and external rewards.

This definition of sport includes four important aspects. First, sports are vigorous physical activities. Therefore, activities such as chess that have minimal activity are excluded. Second, competitive activities have different social dynamics from cooperative

or individualistic activities. Third, as institutionalized activities sports have standard formal rules and organizational structures that people use to frame and guide their actions. Fourth, sports are played for a combination of internal satisfaction that comes from the spontaneity and pure joy of participation and the external satisfaction associated with publicly displaying physical skills for approval, status, or material rewards (Coakley, 1998; Miracle & Rees, 1994).

Another aspect of the definition of sport adopted for this paper is that sport has a duality, as being simultaneously set apart from, yet part of the social world. Coakley's definition does not make clear this relationship. Thus sport can be conceived in two dimensions as both a social practice and as a social institution (Kew, 1997).

First, as a social practice, sport is a joint project (people collaborate, submit to the authority of rules, and agree to the contract to bring about the social practice) in which values internal to the project are realized in the course of trying to achieve the standards of excellence. Internal goods or values are realized through participation in the joint project (i.e., sport practice) and cannot be achieved in any other way. Internal goods may include skill attainment, testing and the development of physical capabilities, feelings of exhilaration and achievement, rewards for commitment and dedication, and qualities of social interaction with others engaged in the same project (Kew, 1997).

Csikszentmihalyi (1992) describes internal goods as 'flow' experiences if sporting practices are structured and valued appropriately. Flow experiences include (a) enjoyment of the experience and the use of skill, (b) the activity itself, (c) attention focused on doing rather than on an outcome, and (d) the merging of action and

awareness, complete absorption, loss of consciousness of self, and a sense of control. Internal goods, such as flow are one dimension of sport.

Second, sport as a social institution is a dimension which can be described as "social practices that are regularly and continuously repeated, are sanctioned and maintained by social norms, and have a major significance in the social structure" (Abercrombie, 1984 as cited in Kew, 1997, p.11). Unlike social practices, which have internal goods, social institutions are concerned with the acquisition and distribution of external goods.

External goods such as wealth and fame are common currency, and can be achieved in a variety of ways. At an individual level, external goods may include status, prestige, power, and financial rewards that come from successful performance. On a macro level, sports are developed and promoted because they are seen to transmit social values deemed worthwhile by the larger society such as achievement, discipline, teamwork, and mental and physical fitness. Social institutions legitimize the external goods and encourage the players and coaches to value the internal goods of the sport only in so far as they realize external goods for the institution (Kew, 1997).

A consideration of sport as a social practice and social institution emphasizes the inherent tension between realization of internal and external goods, thus sport can be viewed as two inseparable dimensions. As a widespread social practice, sport attracts the interest and influence of other social institutions such as schools, particularly in the U.S. to promote their specific interests beyond those provided by the internal goods of sport as a social practice (Kew, 1997).

In summary, several important differences between physical education and sport that may influence the ecologies and the PoAs in each context include (a) physical education is more process oriented (e.g., playing is important) than sport which is outcome oriented (e.g., winning is important), (b) more negative sum games occur in sport than in physical education (i.e., more losers than winners because teams are in leagues and winning the league the ultimate achievement), and (c) sport often provides external rewards for coaches, players and institutions.

In the next section consideration of the aims of physical education and sport will help to illuminate the roles of physical education and sport in our schools and provide context to understand the ecologies and PoAs that teacher/coaches create with their students and athletes. First, I will examine the national guidelines developed by the National Association of Sport and Physical Education (NASPE) to improve physical education in the U.S followed by a parallel examination of guidelines developed by NASPE for the improvement of youth and interscholastic sport in the U.S.

Current Status of Physical Education

NASPE and the Middle and Secondary School Physical Education Council (MASSPEC) have defined quality secondary physical education programs. According to NASPE (1998) such programs can accommodate various individual differences as they relate to previous experience in sport and physical activity, fitness and skill level, intellectual, physical, social/emotional maturity and cultural identity. The instruction provided in quality physical education programs is grounded in the most appropriate pedagogical practices as informed by both research and "best practice" and includes maximum opportunities for all students to learn motor skills and develop health related

fitness. A quality program promotes a healthy lifestyle, critical thinking, ethical behaviors, and the responsibility of citizenship in physical activity settings.

Although quality secondary physical education has been described, few quality programs exist (Ward, 1999). Evidence suggests that effective secondary school physical education programs are rare and many fail to achieve their intended outcomes (Griffey, 1987; Stroot, 1994). Some educators argue that secondary physical education for many students is perceived as missing the sense that something meaningful is being accomplished (Griffey, 1987). Too many students report associating required attendance with strong negative feelings about physical education, physical activity, and themselves (Carlson, 1995; Locke, 1992).

Based on data from 180 schools in the central U.S., schools are still delivering traditional multi-activity programs that emphasize team (52%) and individual (39%) sport with an emphasis on competitive, contact, and male oriented team activities (Napper-Owens et al., 1999). The physical education curricula examined didn't include activity units that would be more inclusive of diverse interests, noncompetitive activities such as dance/gymnastics (4%), cooperative games, adventure activities, or outdoor recreational pursuits (4%) (Napper-Owens et al., 1999).

Leaders in physical education conjectured that such common practices in secondary physical education lead to a crisis state and that without reform secondary physical education would not survive the reform efforts of the 90's (Siedentop, 1987; Stroot, 1994). This prediction was not without merit. In 1996, the Surgeon General's report on physical activity and health documented the decline in physical education programs. In high schools, enrollment in daily physical education classes dropped from

42% in 1991 to 25% in 1995 (United States Department of Health & Human Services, 1996). The report on physical activity and health (USDHHS, 1996) recommends well-designed physical education programs as an effective way to increase physical activity among high school students.

Physical Education Reform

In response to the 1989 Education Summit and the announcement of education goals for the nation and the establishment of a National Educational Goals Panel (1989), national standards were developed to guide physical education reform efforts (NASPE, 1995). The National Standards for Physical Education were developed by NASPE (1995) with input from hundreds of physical education professionals to specify what students should know and be able to do as a result in participating in a quality physical education program. The national standards provide a framework for educators to change the dominant model of physical education and to address content, equity and assessment.

National standards are not a national curriculum. Content standards in physical education highlight the focus of physical education as helping students learn and grow in meaningful ways through participation in physical activity (see Table1). The framework includes two types of education standards: content (i.e., what students should know and be able to do) and performance standards (i.e., what is good enough) (NASPE, 1995). Performance standards linked to content standards are not yet available; however, some performance benchmarks, a term used to describe behavior that indicates progress toward a performance standard, have been developed.

The NASPE standards also introduce a new vision of assessment to physical education. Physical educators must be able to assess individual achievement in order to

know if a standard has been reached. The assessment procedures reflect the important subject matter content, enhance learning through a connection to instruction, and provide meaningful information about student achievement and progress. The NASPE standards affirm that discipline and rigor are essential to achievement in physical education. In essence assessment serves to hold the standards framework together. Also, assessment communicates to students and parents what is valued in physical education and how students are progressing toward those goals (NASPE, 1995).

Despite the current reform efforts, physical education for the most part remains unchanged (Napper-Owens et al., 1999; Ward, 1999). To provide well-designed physical education programs the dominant model of physical education needs to be replaced if change is to influence the physical education for future generations (Locke, 1992). The dominant program model of physical education includes (a) required attendance without choice of activity or instructor, (b) class assignment without the use of student needs or achievement, (c) short classes with time eroded by management rituals and low ALT, (d) short units with only brief introductory level instruction, (e) evaluation based on rule-compliance, participation, and demeanor, and (f) program content based on instructor interest and convenience (Locke, 1992).

In summary, researchers and physical educators have identified the imperative need to change physical education and have recently provided a framework in the NASPE (1996) standards to influence such change. Specifically, reform in physical education must continue to focus on the curricular issues of content, equity, assessment, and contextual factors of the workplace to influence change (Rink, 1992; Stroot, 1994).

Current Status of Sport

Sport has been subject to much social commentary over the last 70 years. Historically, sport was thought to be a venue to develop character, to foster teamwork and to develop the physical abilities to serve the country in the military (Gerdy, 2000; Sage, 1989a). More recently, serious questions about the validity of these early value assertions about school sport have been raised. Researchers have found that sport doesn't develop character, teamwork, and loyalty, but merely selects out for continued participation those persons who already possess such qualities (Fraleigh, 1990; Miracle & Rees, 1994).

People who play interscholastic sport are more likely to come from economically privileged backgrounds, have above average cognitive abilities, self-esteem, and academic performance records (Spreitzer, 1992 as cited in Coakley, 1998; Miracle & Rees, 1994). Spreitzer (1992) also noted students who started playing varsity athletics as sophomores and continued through their senior year were "more privileged" from those who were cut or who voluntarily quit teams. These findings indicate that in addition to a selection process a filtering-out process also occurs in interscholastic sport.

Questioning the value of sport in society is not a new phenomenon, in fact, Marshal (1931) wrote his "inquisition" on British sport in 1931, seven years before the publication of the influential text Homo Ludens, in which Huizinga lamented the bastardization of the 'sacred realm' of play by the 'profane spectacle' of modern sports (Marshal, 1931 as cited in Stone, 1970). Similarly, Stone (1970) provided a critical commentary on the supposed loss of playfulness in contemporary sport and its transformation to 'display' (meaning spectacle) and 'dis-play' (meaning un-playful) (Kew, 1997). Each of these writers, from different national contexts, addressed the social

problems and issues which at the time they saw as threatening the integrity of sport, and the experiences and challenges these diverse activities provided participants (Kew, 1997). Each saw 'true' (i.e., playful, fun) sports being undermined by changing social, economic, and technological contexts.

Sport and play have often been idealized which may contribute to the notion that "true" sport has been undermined. This idealization has become the substance of play theories, and justification for some organized sport. Sutton-Smith (1986) contends that idealization of play and sport forms a mask that serves the arguments of those who need something (e.g., prestige) from play or sport. In terms of sociology of sport tradition, this idealization of play begins with Huizinga's (1955) Homo Ludens and continues in contemporary sociology of sport text (Rees & Miracle, 1986; Kew, 1997). This idealization however enables sport and play to be transformed (at least theoretically) to meet the needs of society. For example, Huizinga's (1950) definition of play is often criticized as an elitist perspective on play, yet he is the first to recognize that freedom is a core meaning of play for both advantaged and disadvantaged children. In an entrepreneurial civilization, freedom of choice is essential to development of any concept of executive leadership (Sutton-Smith, 1986).

Throughout history people have had different ideas about what sport should and could be. A rigid definition of sport (e.g., as adopted for this paper) may acknowledge only physical activities of select groups in society and thus highlights how sports are connected to power, privilege, and social relations (Coakley, 1998; Gerdy, 2000). For example, competitive, institutionalized activities are available only to people with the means to access these opportunities. The definition of sport selected for the purpose of

this paper, however, captures the essence of interscholastic sport in the United States. That is, sport activities involve (a) the use of physical skill, prowess, or exertion, (b) institutionalized competition, and (c) the combination of intrinsic and extrinsic reasons for participation.

Beginning in the 1980's and continuing today, participation in youth sport and interscholastic sport has grown significantly (Clark, 2000). Today between one-half and two-thirds of American youth play organized sport. This puts the number in a range of 24-33 million participants (Clark, 2000). Part of the increase in sport participation can be attributed to an increase in the number of girls involved in sport since schools and communities added programs to comply with Title IX (Gerdy, 2000). Also, a changing economy and working patterns, the importance of sport in society for both boys and girls, and the need for adult supervision all contribute to the growing number of youth involved in sport (Clark, 2000; Coakley, 1998).

Sport can provide important developmental experiences for children and youth; this is achieved through increased playing competence and through personal growth and self-responsibility (Siedentop, 1994). Sport experiences, however, vary dependant on how and under what conditions sports are organized and played. From one conceptualization of sport the dominant sport form in the U.S. is the power and performance model (Coakley, 1998).

Power and performance sport (e.g., football, soccer, and basketball) are highly organized and competitive, and emphasize the use of strength, speed, and power to dominate opponents. In sport organized from the power and performance model, athletes are subordinate to coaches, opponents defined as enemies, and success comes in the form

of competitive wins born from hard work and sacrifice. The body is trained and monitored in order to respond efficiently and forcefully to the challenges and demands of the sport (Coakley, 1998).

The power and performance model of sport receives the most attention and support from the general public. "Power and performance sport are based on a cultural logic that celebrates winners and idealizes the domination of some people over others...the natural way to distribute rewards is through competition" (Coakley, 1998, p. 100). Coakley (1998) suggests this is because sports are part of culture and in the United States people with power and resources want sport to reproduce their privileged position in society. In a democratic society, merit is the standard to determine if power and wealth is fairly distributed. To account for the inequities in society, the notions that power and wealth are earned through intelligence and hard work and that competition is a natural part of life, justify powerlessness and poverty as a lack of intelligence and hard work (Coakley, 1998).

Sport does not have to manifest the ideals associated with the power and performance model. Interscholastic sport programs can be an authentic part of the educational program and can benefit from the direction provided in an educational context. First, it can be organized to provide opportunities for athletes to connect with adults (e.g., coaches) who can serve as advocates in their lives (Coakley, 1998; Miracle & Rees, 1994). Second, sport can be designed as educational opportunities to promote pro-social behavior and as an authentic opportunity to learn responsibility and commitment (Alexander, Taggart, & Thorpe, 1996). Third, interscholastic sport can provide fitness training and stimulate interest and competence in physical activity. Finally, sport can

provide the opportunity to develop and display skills (e.g., leadership, teamwork) valued in society (Coakley, 1998; Miracle & Rees, 1994).

In summary, interscholastic sport when organized as just discussed can bridge the gap between schools and local communities when people associated with the program (e.g., teacher/coaches and officials) are ambassadors for the schools' educational goals. Because sport plays an important cultural role in the U.S., sport leaders must be aware of the problematic nature of sport as well as its virtues. In the next section, reform in sport to bring sport in alignment with educational goals will be discussed.

Sport Reform

Coaches can influence interscholastic sport by adopting pedagogically appropriate and ethical practices that could support positive and productive learning environments. Interscholastic sport could be organized with opportunities for athletes to establish mutual concern and support for teammates and opponents and to allow for more democratic decision making structures by cooperating, sharing the power, and establishing give-and-take relationships between coaches and athletes (Coakley, 1998). This shift would better serve our schools, athletes, and society by teaching pro-social behaviors that are in alignment with educational goals.

To achieve the educational aims of sport, coaches need opportunities to learn ways that sport can be made educationally relevant. Most successful coaches are content experts, but coaches need to understand how to nurture students' development through their participation in sport. Often coaches, who have training in physical education, complete coursework in child development and sport psychology that can facilitate an

understanding of student development. Yet previous sport experiences often leave a lasting impression on how sport should be organized and coached. Often physical education teacher/coaches teach the way they were coached despite what they learn in preservice teacher education programs (Pagnano & Langley, 2001).

One way to improve interscholastic sport is to prepare our sport leaders better. Recently, National Standards for Athletic Coaches have been developed (Quality Coaches, 1995). The premise of this document is that its contents be used to ensure the enjoyment, safety and positive skill development of America's athletes. The purpose of the Standards is to help organizations and agencies that certify or train coaches to provide coach education or to design programs to meet the needs of future or practicing coaches. These standards highlight not only expertise in content knowledge, but also focus on the personal development of athletes. There are 37 standards grouped in eight domains. The eight domains are as follows: (a) Injuries: Prevention, Care, and Management, (b) Risk Management, (c) Growth, Development, and Learning, (d) Training, Conditioning, and Nutrition, (e) Social/ Psychological Aspects of Coaching, (f) Skills, Tactics, and Strategies, (g) Teaching and Administration, (h) Professional Preparation and Development (Quality Coaches, 1995).

The document distinguishes five coaching levels with competencies at each level. For example, competencies at Level 1 include use of appropriate conditioning drills consistent with the needs of the sport and activity, whereas a Level 5 competency includes knowledge of the general developmental sequence in physical activities. Level 1 is intended to represent a minimum entry level of qualification for anyone who begins to

coach on any level. Level 5 represents the mastery of all standards and associated competencies that define a fully competent master coach (Quality Coaches, 1995).

I have two criticisms of the National Standards for Athletic Coaches. First, the levels of expertise indicate that the master coach (i.e., Level 5) is prepared and is partially defined by their work with elite level athletes and programs. Master coaching competencies are needed at all levels of sport. The place that 90% of children experience sport is in youth or interscholastic sport (MIAA, 2002). Therefore, youth and interscholastic coaches need to have a high level of competence so that children can have a positive sport experience. Second, sport is not presented as problematic. Coaches who meet the standards will be well prepared to coach within the power and performance model of sport. Since coaches should be prepared to address the inequities in sport, these guidelines are not adequate.

Narrowing the Gap Between Interscholastic Sport and Physical Education

As explored in the preceding sections, sport and physical education share both similarities and differences in their purpose, structure, leadership and organization (Bergmann-Drewe, 2000; Lee, 1988). I believe interscholastic sport should be intimately connected to the educational aims of school, in part because sport is funded and sanctioned by schools. To connect interscholastic sport to the educational aims of school, four changes may improve the educational experiences of student/athletes in sport.

First, coaches need to shift their focus beyond psychomotor and cognitive development in sport to include behavior and social dimensions. Sport, with relatively low numbers of participants, can support the affective development of athletes in ways difficult to accomplish in large physical education classes. This would require coaches to

expand their role from primarily a trainer (i.e., development of competence in limited skill or mode of thought) to an educator (i.e., development linked to wider system of beliefs), concerned about the total development of the athlete (Bergmann-Drewe, 2000).

Second, sport could be organized to provide opportunities for student involvement in decision-making. The notion that the coach should be responsible for all decision-making is without educational merit. Students need to have opportunities to problem solve and be responsible for their decisions and their consequences. High school sport could instead be organized to teach responsibility and independence, not conformity and obedience that characterize much of it today (Bergmann-Drewe, 2000; Coakley, 1998).

Third, physical education teacher/coaches need to value competition in appropriate ways. The pursuit of excellence rather than winning is an important meaning of competition that needs to be embraced in physical education and sport (Siedentop, 1981). The model of competition should not be the professional or "big-time" model that includes "a win at all costs" philosophy or one that connects employment to winning (Siedentop, 1994). Rather, competition should provide opportunities for students to realize their potential and to work together with teammates to accomplish their goals. Competition viewed from this larger perspective could provide meaningful learning opportunities for students in both physical education and sport.

Fourth, because the content in physical education and sport is overlapping, so are some of the professionals who want to work in both contexts (Sage, 1989a). Sport and physical education benefit when leaders are effective teachers; therefore, to reform sport and physical education, direction is needed from educated professionals who understand

pedagogy, child development, and social justice. Physical education teacher/coaches need to create appropriate learning ecologies in both contexts.

In summary, interscholastic sport and physical education serve different purposes in U.S. schools. Well-designed physical education programs could provide opportunities for all students to participate in a variety of sport, game, dance and physical fitness activities. Physical education is now recognized as an effective way to increase physical activity, yet fewer students are currently enrolled in secondary physical education programs (USDHHS, 1996). In contrast, participation in interscholastic sport has significantly increased, yet the educational value of sport has been called into question. Both physical education and interscholastic sport are in the process of reform and the new national standards in physical education and standards for coach education provide a framework for this improvement.

Physical Education Teacher/Coaches

In this section, physical education teacher/coaches will be discussed. The focus shifts to the sport leaders (i.e., physical education teacher/coaches), rather than the context of sport and physical education, although acknowledgement of the contextual differences may provide insight into the behaviors of teacher/coaches. Researchers have conducted studies with physical education teacher/coaches, as well as with classroom teacher/coaches. This examination highlights, but is not limited to, research on physical education teacher/coaches because the focus of my study is on their behaviors in both physical education and sport settings.

I do not include the extant coaching literature because although much research has been conducted to examine the behaviors and effectiveness of coaches, some of

whom are physical educators, this literature base is primarily atheoretical. The coaching literature has developed along several fragmented lines. A number of observation instruments have been developed and used extensively by researchers in coaching studies to identify effective and ineffective characteristics of coaches. Also, several models of coach development and coaching education have been described for youth to elite level coaches. Further, the coaching literature is problematic, as participants in coaching research may be highly trained elite level coaches or may completely lack specialized training. I was specifically interested in the behaviors of teacher/coaches as dual role professionals in sport and physical education; therefore research on coaching was not salient to this examination.

Researchers have conducted studies with teacher/coaches with a variety of research foci, which include values (Bain, 1978), role conflict (Bain, 1983; Locke & Massengale, 1978; Massengale, 1977; Sage, 1989a), role orientation (Chu, 1984; Massengale, 1974; Segrave, 1981), personal attributes (Sage, 1980), instructional behaviors (Rupert & Buschner, 1989), and life history (Templin, Sparkes, Grant, & Schempp, 1994). Only one study has been conducted that examined the same teacher/coach in sport and physical education from an ecological perspective (Pagnano, 2002).

Thirty years ago almost all high school coaches were teachers. Since 1987, men and women who have a dual role of teacher/coach lead only one-third to one-half of all athletic teams (Clark, 2000; National Federation of High Schools, 1987, 2000-2001). Today, the majority of the 6.5 million high school athletes are coached by non-teachers (Gerdy, 2000; National Federation of High Schools, 2000-2001). In Massachusetts, 50%

of the 15,000 high school coaches in 2000-2001 were teachers (Massachusetts Interscholastic Athletic Association, 2002). The current number of physical education teacher/coaches has been difficult to ascertain. In one study, 77% of physical education majors wished to combine teaching and coaching (Placek et al., 1995). This does not indicate employment as a teacher/coach; however, with the availability of teaching and coaching positions employment as a teacher/coach would be reasonable. Although more teams are coached by non-teachers, it is also important to note that the number of high school interscholastic teams has increased two-fold since the early 1970's (Ewing, Seefeldt, & Brown, 1997). Thus, it is unclear if there has been a withdrawal of physical educators from coaching. What is certain is that more non-teachers have entered the coaching ranks. As sport participation continues to grow the need for qualified coaches will increase and physical education teacher/coaches, who possess both pedagogical knowledge and sport knowledge, will continue to be in demand (Clark, 2000).

Role Theory

In this section, the research conducted with teacher/coaches will be explored. The multiple role demands upon physical education teacher/coaches, and their responses to them, had been the subject of much empirical inquiry in the form of research on teacher/coach role conflict (Bain, 1978; Bain & Wendt, 1983; Chu, 1981; Locke & Massengale, 1978; Sage, 1989). In the past 10-15 years, limited research on the dual role of teacher/coaches has been published. The recent paucity of literature may be a result of several factors that include (a) changes in demographics (i.e., fewer physical education teacher/coaches), (b) changes in researchers' interests, and (c) relevant questions about

the dual role of physical education teacher/coaches have been answered. A brief overview of the role conflict literature follows.

Role theory provides a useful perspective to examine the education and performance of teacher/coaches. In much of the research conducted with teacher/coaches, role was defined as a pattern of expected behaviors for a specific position in society (Locke & Massengale, 1978). This definition of role fits within a theoretical perspective known as a structural perspective (Callero, 1994). From this perspective teacher/coaches occupy two social roles: those of teacher and of coach. According to role theory, "people carry out the functions of their positions and responsibilities in response to their perceptions and expectations that others, especially 'significant others' hold for them" (Kjeldsen, 1985, pg. 72). From this perspective of role theory, different role expectations may lead to role conflicts for teacher/coaches.

Role conflict. Role conflict refers to being exposed to contradictory expectations at the same time (Getzels & Guba, 1954). Teacher/coach role conflict results from the conflicting expectations of teaching physical education and coaching a sport team (Chu, 1981; Bain, 1983a; Earls, 1981; Locke & Massengale, 1978; Templin, 1980). Locke and Massengale's (1978) early work assessed the extent and intensity of selected role conflicts encountered by classroom and physical education teacher/coaches. Findings indicate that teacher/coaches were exposed to three broad categories of role conflict that include (a) intra- role conflict (i.e., when one person must respond to incompatible expectations for the same role from different groups of people), (b) inter-role conflict (i.e., conformity to the expectations associated with one-role results in non-conformity to

the expectations associated with the other), and (c) load conflict (i.e., demands that require more time, energy and commitment than one has).

The differences between excessive time demands (i.e., load conflict) placed on teacher/coaches and to what extent stress results from contradictory role expectations (i.e., role conflict) remain unclear (Chu, 1978; Bain, 1978, 1983). Bain's (1983) model representing factors influencing role performance emphasizes situational variables such as unreasonable time demands (i.e., load conflict) as salient to the teacher/coaches' role performance. This model indicates that role compatibility, role commitment, and situational variables rather than role conflict influence role performance.

Marks (1977) noted that equally positive commitment to multiple roles minimizes role overload. When teacher/coaches experienced strain they were likely to neglect the role for which they had the least commitment. Physical educators who experience overload tend to report that a negative impact is primarily upon their teaching (Locke & Massengale, 1978; Earls, 1981) and identified coaching as their primary role commitment (Chu, 1978; Segrave, 1981; Yalcin, 2000). The primary role is given more time and attention; the secondary role is subject to "role-withdrawal" with a reduction in time and attention (Getzels & Guba, 1954; Locke & Massengale, 1978).

Differentiated commitment to each role is one way to reduce the stress of occupying dual roles (Locke & Massengale, 1978). Generally, coaches found it easier to neglect teaching responsibilities because coaching was their original motivation for their career choice (Sage, 1989b). Also, teacher/coaches were not equally interested in their performance in both roles (Figone, 1994). Role preferences of both preservice and inservice physical educators indicate that 62%-65% prefer the coaching role to the

teaching role (Chu, 1978, 1984; Segrave, 1981). Yalcin (2000) found male teacher/coaches preferred coaching and female teacher-coaches preferred teaching.

Various personal factors may influence the commitment of one role over the other role. The experience of one physical education teacher/coach suggests that coaching promoted a strong sense of self-worth and placed the teacher/coach in an esteemed position in the community, a position he could not attain as a physical educator (Templin et al., 1994). The careers of teacher/coaches are idiosyncratic to the contexts and personalities studied. Some teacher/coaches find satisfaction with the simultaneous demands of teaching and coaching; other teacher/coaches find their roles difficult to balance (Locke & Massengale, 1978; Sage, 1989b).

Another perspective to role conflict suggests that the lack of pressure to improve what is going on in physical education and the lack of instructional challenges may provide some explanation why teachers seek self-worth and challenge in coaching (O'Sullivan, Siedentop, & Tannehill, 1994). Evidence suggests that multiple roles (i.e., teacher/coach) can result in net gains in well-being for the individual involved (Claesson & Brice, 1989). From this perspective the dual role of teacher and coach can be viewed as complementary and contributing to professional and personal well-being.

A definition of role from a structural perspective has been adopted in much of the teacher/coach role conflict (e.g., Locke & Massengale, 1978) literature. Under traditional structural conceptualization, roles are viewed as behavioral expectations that are associated with, and emerge from identifiable positions in social structure. The structural perspective emphasizes the constraining and determining features of social roles (e.g.,

role-playing). The resource perspective, a more recent approach to understanding the concept of role acknowledges an agency-structure duality (Baker & Faulkner, 1991).

Baker and Faulkner (1991) argue that roles actually allow actors (e.g., physical education teacher/coaches) to create new positions and establish social structure. Positions are particulars unique to each actor, whereas roles are universal that are maintained independent of the actor. The unique and distinct consequence of this distinction is that roles are not viewed as a consequence of one's position in a social structure. Role is viewed as a cultural object. Through their use, roles aid in the construction of social action, a feature basic to the argument that roles are employed as resources (Callero, 1994). Roles are viewed as resources that enable individuals to accomplish certain ends. Without role, certain types of action are not possible. In effect, roles make agency possible. Therefore teacher/coaches as dual role professionals may have access to additional resources not available to physical education teachers or coaches.

A general recognition of the interdependence between action, role, and structure is an important advance that can serve as a foundation to explain how effective teacher/coaches participate in an agency-structure relationship. Structure is carried in reproduced practices and relationships that have become stable (Sewall, 1992). Social structures simultaneously control action and are produced by action. Sewell (1992) argues that sets of mutually sustained schemas (cultural assumptions, taken for granted rules) and resources (objects that serve as a source of power such as fear, respect, and reverence) constitute structure. Role as a cultural object is simultaneously a schema and a resource, and therefore maintained as an element of social structure (Callero, 1994).

If the role as a resource perspective is adopted for understanding the work of teacher/coaches then role-playing can be replaced with role using which is essential for understanding the creative construction of action. Some roles, more than other roles, are recognized as legitimate cultural objects. The role of physical education teacher/coach has cultural endorsement and thus teacher/coaches have access to the resources (e.g., political power) associated with the role (Callero, 1994).

In summary, research conducted from the structural perspective found that occupying the dual roles of teacher and coach appears to be a source of stress for some teacher/coaches. This stress may be a result of role conflicts or role overload. Bain (1983) proposed a model to describe the factors influencing role performance of teacher/coaches; however, research on the teacher/coach has not been conducted to describe how factors influence role performance. The resource perspective provides another view of role theory, which suggests that roles can be used for agency and to create social structure.

In the next section, similarities and differences in the behavior of the same teacher/coach in physical education and sport will be explored. This brief section points to the need for further research on the practices of teacher/coaches in both contexts.

Teacher/Coach Behaviors in Sport and Physical Education

The knowledge that role conflict or role overload may exist does little to inform us about teaching/coaching effectiveness across both settings (Rupert & Buschner, 1989). Several researchers have compared the teaching and coaching behaviors of the same physical education teacher/coach in both physical education and sport settings (Agnew, 1978; Kasson, 1974; Mason, 1978, as cited in Rupert & Buschner, 1989; Pieron &

Goncalves, 1987; Rupert & Buschner, 1989). Results consistently indicate the teacher/coach used more student interaction, questioning, and praise in the sport setting than in physical education (Mason, 1978 as cited in Rupert & Buschner, 1989).

In a study of six teacher/coaches in physical education and sport, researchers found that differences were evident in motor engagement and in feedback (Pieron & Gonclaves, 1987). For example, more time was spent in full game play in physical education than in coaching. In the coaching setting game-like situations (e.g., 2 v 2, 3 v 3) were used and players had greater opportunities to be in contact with the ball. Student wait time was twice as high during full-game participation in the teaching (31.5%) setting than in the coaching (16.0%) setting. Use of game-like strategies maximized the time spent practicing specific learning tasks. Also both prescriptive and evaluative feedback were more common in the coaching setting. Findings from this study suggest teacher/coaches established a more positive learning environment in the sport context than in physical education (Pieron & Goncalves, 1987).

Rupert & Buschner (1989) coded the instructional behaviors of nine physical education teacher/baseball coaches and found they used more praise, silence, and spent more time in pre-instruction in sport practice than in physical education. In physical education the low instruction time (16.9% physical education, 25.2% in baseball practice) and the high management time (21.7% in physical education and 7% in baseball practice) point to the recreational nature and poor management of their physical education classes. These same teacher/coaches organized businesslike, task oriented practice sessions in the coaching setting. One limitation of this study was that the behaviors of baseball coaches were compared to their teaching behaviors in a variety of activities in physical education

that did not include baseball. Contextual factors of the physical education activities may account for some differences.

Contextual factors related to the activity were controlled in a study that examined teaching and coaching behaviors of an exemplary college physical education teacher/tennis coach (Spencer, 1999). Data were collected in a physical education tennis class and at tennis team practice using a modified version of the Arizona State University Observation Instrument (ASUOI), student and athlete surveys, and in-depth interviews with the participant. Findings indicate that nearly equal amounts of instruction were offered in the participant's teaching and coaching roles. Significant use of verbal instruction, modeling, monitoring/feedback, praising, and humor were demonstrated across both roles. The participant had a strong commitment to the teaching role. One of the most significant findings "...is the acceptance rather than the polarization of these roles, as the participant defined coaching as teaching" (p. 22).

In summary, because the life-world of some secondary physical education teachers include a coaching position, recognition of these dual role professionals is necessary to understand them more holistically. Research conducted to understand or describe secondary teacher/coaches must acknowledge this dual role if legitimate models for concurrent teaching and coaching are to be designed and utilized. Since positive instructional behaviors and reduced management have been identified in the sport context (Siedentop, 1983), a closer look at teacher/coaches from an ecological perspective in the sport context is warranted. Many of the positive instructional, managerial, and social behaviors that teacher/coaches develop in the sport context also have been shown to be effective in physical education. Although researchers have studied the same

teacher/coach in sport and physical education, why differences occur in their instruction, management, and student interaction is not yet clear. The ecological perspective provides a solid conceptual framework to examine teacher/coaches in sport and physical education. Since the contexts of sport and physical education share both similarities and differences an examination of their ecologies and PoA may facilitate a more complete picture of learning than has been constructed in previous research. Due to their contextual differences, a robust PoA in sport may look very different from a robust PoA in physical education. In the next section, context of the classroom, PoA, and the task systems operating in sport and in physical education will be examined.

Ecological Perspective

To understand the ecology of various teaching and coaching environments, a clear conception of specific characteristics of learning environments (e.g., physical education class and sport practice setting) is fundamental. These characteristics have distinctive properties that affect both students and teachers regardless of how the students are organized for learning or what educational philosophy the teacher embraces (Doyle, 1986b). The intrinsic features of the learning environment serve to shape the environment in which teaching/coaching and learning occur (Doyle, 1986b).

The complexity of learning environments is highlighted in these six intrinsic features. First, learning environments have multi-dimensionality in the large quantity of different kinds of tasks and events. Second, simultaneity exists in the many things that happen at once in learning environments. Third, immediacy is evident in the rapid pace of classroom/practice events and teacher/coaches must address events at once. Fourth, unpredictability is common as interruptions include announcements, and unexpected visitors. Fifth, publicness is a component in that classrooms are public places and many people often witness events involving the teacher and students. Finally, a class/team has a history in that it accumulates a common set of experiences, routines, and norms that provide a foundation for the conduct of activities (Doyle, 1986b). The most challenging features of the learning environment include multidimensionality, simultaneity, and unpredictability (Doyle, 1977). The process of understanding learning environments involve teacher/coaches learning a specific set of strategies such as chunking, overlapping, and timing that reduce complexity (Doyle, 1977).

Classroom organization is another set of conceptions salient to the examination of a classroom from an ecological perspective. The basic unit of classroom or practice organization is the task. There are, however, at least four structural levels in a classroom that include (a) the class session (i.e., unit of time for the class), (b) the lesson, or the set of activities bounded together by a common focal content, (c) the activity, or the distinctive pattern for organizing students for work for a unit of time within a lesson, and (d) the routine, for handling housekeeping matters in a classroom (Doyle, 1986b). Classroom structures as well as the activity features have a powerful influence on the types of control a teacher exercises in a classroom (Doyle, 1985a, 1986b). The classroom structure of physical education is different from other classes in the school due to the nature of the subject matter, diversity of student abilities, and the space and noise considerations of the environment (Locke, 1975). In physical education, class sessions are often less frequent than core academic courses and bounded by management routines.

Classroom lessons are products of the actions, interactions, and conversations of the teacher or coach and students; they are dynamic and evolving (Weade & Evertson, 1988). Together, students and teachers construct lesson/practice sessions to reach instructional goals, as management and instruction co-occur (Weade & Evertson, 1988). Instructional content is interpreted and modified through teacher and students' talk and action. Regardless of the lesson content, students usually spend time working on tasks alone, in small groups or in tasks that involve whole-group presentations (Doyle, 1986a; Doyle & Carter, 1984).

The features and organization of a classroom point to the complex nature of the teaching and learning environment. A central premise of the ecological perspective is that

meaning, function, and the effect of discrete behaviors are shaped by the larger contexts of activities, lessons, and class sessions (Gump, 1967). The task systems model integrates the academic, managerial, and social dimensions of classroom life in a way that highlights how academic work is affected by classroom events (Doyle & Carter, 1984). To understand the salient characteristics of the task systems and the PoA in physical education and sport, the following questions will guide the exploration: To what extent do the interrelated task systems function in sport and physical education? How are POAs different in the context of physical education and sport? What do we know about physical education and sport contexts from the ecological perspective?

In the next section I will present the literature that pertains to the task systems model that includes the (a) PoA, (b) task systems model, and (c) task systems in sport and physical education.

The Program of Action

In this section, the PoA will be discussed in relationship to the task systems in physical education and sport. Figure two provides a graphic representation of the relationship among the task systems and the PoA. The PoA is represented as a learning ecology on a continuum from casual to robust. Aspects of each task system are presented for casual and robust learning ecologies.

The PoA represents the zone of activity where issues of subject matter and management come together. There is a specific direction, energy, and momentum to the PoA (Doyle, 1986b). The PoA encompasses the "position and sequencing of content and management within lessons" (Hastie & Siedentop, 1999, p. 12). "This [PoA] is defined by both the rules for social participation and the demands of academic work" (Doyle,

1986b, p. 424). The PoA contributes in the determination of appropriate behaviors for students during different instructional contexts as behavioral boundaries for tasks are established (Doyle, 1986b; Hastie & Siedentop, 1999). The PoA lets students know what is important and what quality of work is acceptable to the teacher (Hastie, 2000). Jointly constructed by teachers and students, the PoA functions in settings of significant complexity (Doyle, 1986b). The dynamic nature of a classroom, the type of academic task, and the organization of the class are several factors that contribute to a PoA (Doyle, 1986b).

The PoA has implications for both order in the classroom and the accomplishment of academic work. Order in a classroom denotes that within acceptable limits students are following the program of action necessary for classroom events to be realized (Doyle, 1986b). Classroom order is defined and achieved within contexts and "each context makes different interactional demands on the members of the class" (Shultz & Florio, 1979, p. 169 as cited in Doyle, 1986b). Not all rules are in play at all times. Rules are tied to contexts or phases of a class session or lesson (Doyle, 1986b).

From the perspective of order, cooperation rather than engagement with academic content is the minimum requirement for appropriate student behavior (Doyle, 1979b). The agendas that the teacher has for academic work and for the accomplishment of order are embedded in the activities teachers and students enact together through the PoA (Doyle, 1986b; Hastie, 2000). Three aspects of student work are highlighted through a series of tasks in the PoA: (a) the products students are to formulate, (b) the operations used to generate these products, and (c) resources available for these products (Doyle, 1983a; Hastie & Siedentop, 1999).

The PoA is conceptualized with two primary zones of classroom activity called vectors (Merritt, 1982). As a scientific concept vectors are described as having direction and magnitude (Webster's, 1988). Used in an educational context, vectors represent the movement and management of the events and activities in the classroom (Doyle, 1986b). As these vectors are entered into, they have the ability to pull events and participants along a particular course (Hastie, 2000). Teacher initiated tasks fall within what is called the primary vector of activity (Doyle, 1986b). "The primary vectors are manifested in those agendas that the teacher has for the lesson, and define both action and the order necessary for the action to move forward smoothly" (Hastie & Siedentop, 1999, p. 12). In a classroom where the primary learning vector has direction and momentum, teachers have a strong focus on content development, and the students' focus on completion of meaningful work and acceptable behavior (Hastie, 2000).

Secondary vectors within the overall PoA can be created by any student or teacher actions that challenge the strength of the primary vector in a lesson, thus pulling or pushing it off its intended direction and weakening it (Supaporn et al., 2003). The students' response to a teacher initiated task falls within the secondary vector of activity. Tasks in the secondary vector of activity serve to test the durability of the primary vector (Doyle, 1986b; Hastie & Siedentop, 1999). Secondary vectors of activity are often part of the student social agenda. Goals inherent to this vector include reducing the demands of the task, lessening the chance of being held accountable, seeking more 'interesting' tasks, to engage socially with peers, or to react out of boredom (Merritt, 1982).

How and when a teacher reacts to these secondary vectors serve to define the strength of the primary vector and signal to students acceptable behavior in the classroom

(Doyle, 1986b). Strong secondary vectors of activity are evident when a teacher trades instructional rigor for cooperation in management tasks, which allows student social systems to flourish, as passing the class is no longer problematic (Hastie, 2000; Hastie & Pickwell, 1996; Supaporn et al., 2003). In classrooms with strong secondary vectors, to be a "member in good standing" students must comply with class rules and routines, yet are only required to engage at a minimal level in the instructional task system (Tousignant & Siedentop, 1983). Moreover, since student academic work tasks comprise the usual PoA, the extent to which both students and teacher negotiate instructional, managerial, and accountability tasks has a significant influence on the strength of the PoA (Supaporn et al., 2003).

When student agendas dominate lessons, the PoA is characterized as "casual," whereas a strong primary learning vector of activity is characterized as "robust." Researchers described the environments of eleven high school physical education teachers' classes as "casual" with students and teachers coexisting in a relaxed, positive and non-confrontational environment. Student misbehavior was infrequent and the boundaries of the managerial task system were rarely tested (O'Sullivan et al., 1994). The environment was characterized as "no-sweat for the students and no sweat for the teachers" (Siedentop et al., 1994). This "no-sweat" environment did not promote accomplishment of significant student learning in physical education.

With a positive direction and momentum, a robust PoA contributes to an ordered classroom with a strong focus on content development and ongoing social interaction (Hastie, 2000). Curricular reform efforts that focused on instructional alignment (Cohen, 1987), that is aligning teacher beliefs, practices, and the outcomes of instruction appear to

have implications for the PoA (Ward, Doutis et al., 1999). Stronger PoAs associated with curriculum reform in middle school physical education programs were evident when accountability tasks were accomplished collectively through teacher, peer, and self-assessment activities. These strategies helped to maintain focus on unit outcomes and distributed the responsibility for assessment among the lesson's stake-holders (Evans et al., 1999; Ward et al., 1999).

Robust PoAs with engagement in academic work and cooperation in the management system have been documented in physical education (Carlson & Hastie, 1997; Evans et al., 1999; Hastie, 2000; Ward et al., 1998). Recently, in a study of a sport education season, three vectors of activity were identified that supported the PoA (Hastie, 2000). These included the (a) teacher's managerial system, (b) student social system, and (c) content embedded accountability of sport education. In this study, the student social system worked to support the instructional task system as the students' social agenda included 'having fun while playing good games' was congruent with the teacher's objectives for instruction. Managerial accountability was extended to student leadership and self-management, which allowed the teacher time to maintain the momentum of instructional tasks (Hastie, 2000).

Robust PoAs in sport have been documented in several settings. Successful PoAs, in relationship to win-loss record, focused on fundamental movement and skills and carefully planned and orchestrated practices existed in both high school and junior elite sport settings (Griffin et al., 1998; Hastie & Saunders, 1992). A complex accountability system with formal and informal accountability tasks such as timed trials, challenges, and match play results supported the PoAs (Hastie & Saunders, 1992; Griffin et al., 1998).

In summary, the PoA represents the zone of activity where instruction and management come together and define the patterns for social participation. There is little evidence to support reasons why some physical education teacher/coaches do not create dynamic, ordered, learning classrooms with robust PoAs that allow students opportunity to actively engaged in the learning process in both physical education and sport. I believe that the status of physical education in our schools and the neglect that physical education programs endure from some students, parents and the administration may contribute to this phenomenon. Researchers have revealed that strong PoAs can be enacted in both physical education and sport contexts (Hastie, 1995, 2000; Griffin et al., 1998; Ward, 1999). When instruction, supported through accountability tasks and student social task engagement, is emphasized more than management, the PoA may become robust and students have the opportunity to engage in significant academic work. How task systems and PoAs are enacted by the same teacher/coach in both physical education and sport requires further examination.

The Task Systems Model

Early work completed using an ecological perspective was initiated by Walter Doyle (1979b). Features of his work include the notion of classroom activity that consists of a series of tasks and task systems. Within the ecological framework the term 'task' is defined as a goal and a set of operations to achieve the goal. A task has four essential elements: (a) a goal or product, (b) a set of resources available to the situation, (c) the operations that are used to generate the product, and (d) the significance or the value associated with the task (Doyle, 1983a, 1986b).

Doyle's ecological framework has been applied to a variety of classroom environments (Doyle, 1981, 1986a; Doyle & Carter, 1984). Limited research, in the sport setting, has been grounded in the ecological perspective (Hastie, 1993; Hastie & Saunders, 1989, 1992; Griffin et al., 1998). If sport and physical education are conceptualized as parallel environments, particularly for people in the dual professional roles of teacher/coach, the task systems model provides a meaningful way to examine systematically the contexts of teaching physical education and coaching sport.

Sport and physical education can be viewed as parallel environments for several reasons. First, in sport, intrinsic features similar to those of classrooms characterize the learning environment. Sport practice, like a classroom lesson involves multi-dimensionality, simultaneity, immediacy, publicness, and history, all of which interact to create a complex learning environment (Doyle, 1979b, 1986b). Second, the structure of sport practices resembles the structure of physical education classes due both to the nature of the subject matter (e.g., softball), and the space and noise considerations.

Third, the same task systems that operate in the classroom setting can be used as a framework for understanding events and happenings in the sport context (Griffin et al., 1998; Hastie & Saunders, 1992). For example, the evaluative climate of the sport setting connects tasks to a reward structure; this connection also defines the accountability system operating in a classroom. Furthermore, for students or athletes to learn they must be engaged in sustained, deliberate practice. An effective management system produces the time and order needed for students/athletes to engage in the content in meaningful ways in both sport and physical education (Siedentop & Tannehill, 2000). Thus, in sport

and physical education the interactions among the task systems are essential to the achievement of desired learning outcomes.

Finally, in previous research on sport settings using the ecological perspective, a parallel was made with teaching settings, with the coach as teacher, players as students, and practice tasks as academic tasks (Hastie & Saunders, 1992; Griffin et al., 1998). By using the constructs of the practice task and the academic task as parallel, a link between the teacher/coach behavior and the student/player behavior can be developed.

From an ecological perspective task systems are groups of tasks that are organized around particular aspects of a lesson (Tinning & Siedentop, 1985). A task system is a regularized pattern for accomplishing tasks. It is composed primarily of the tasks that tend to occur regularly within classes. Task systems overlap in their boundaries and are interrelated as events in one system affect events in another (Doyle, 1986a). Figure 2 provides a graphic representation of the four task systems (i.e., instructional, management, student social, and accountability) in physical education and sport. Aspects of each system on a casual to robust continuum of learning ecologies are included.

Initially, Doyle (1979b) identified two task systems, the managerial and instructional task systems, from research conducted in secondary literature classes. Later, a student social task system was explored (Allen, 1986; Doyle, 1986b; Jones, 1992; Siedentop, 1988). The managerial task system is defined as tasks that are characterized by order in the setting through a set of established (i.e., rules and routines) operations needed for a particular activity to be achieved (Doyle, 1986b). The instructional task system is defined as tasks relating to the acquisition of skill and knowledge and the academic work of students. The student social task system is defined as the appropriate

social structure for participation and behaviors controlled primarily by students (Doyle, 1986b). For the purpose of this paper I am defining accountability as a task system and will provide a rationale for this decision in the section on accountability. The accountability task system is defined as tasks that hold participants responsible and answerable for specific results and outcomes of an activity.

Tousignant and Siedentop (1983) completed the earliest work that identified task systems in physical education in an extensive qualitative study based on the observations of 127 secondary physical education classes. Since the development of the various task systems categories (i.e., management, instruction, and transitional tasks), work has been completed that further examines the aspects and nature of tasks and task systems in both physical education and sport settings. Recent work completed from an ecological perspective has focused on the PoAs in specific physical education and sport settings (Griffin et al., 1998; Hastie, 2000; Supaporn, 2000; Stroot, 1994; Ward, Doutis, & Evans, 1999).

How teachers design classroom tasks, often with consideration to management and pedagogical practices, has a significant effect on how the curriculum is presented to students. The selection of instructional tasks, for instance, has consequences for the order of a classroom. For example, a simple memory task requires few questions and students can easily attend to them, whereas tasks that involve higher-level processing may require a teacher to answer many questions, which changes the class flow (Doyle, 1985a). Teachers who are more skilled at gaining and maintaining the cooperation of their students may be able to create order in the classroom during instructional tasks that

involve higher-level processing. Thus, order may facilitate student learning as the teacher can utilize instructional tasks that require a range of processing difficulty.

The interrelationship among the task systems is evident in the connection between instructional tasks and the social demands required to participate in academic tasks. Embedded in instructional tasks are structures for social participation (e.g., responding when called on or giving a choral response) that require different procedural competence. To successfully participate in class students must pay attention to who talks, when, about what, and in what ways (Weade & Evertson, 1988). The accomplishment of academic work involves not only the reproduction or organization of the task environment to cross a gap of information, but also knowledge about how to participate socially in the specific academic task structure (Doyle, 1983a).

In summary, the task systems model provides a useful perspective to examine the ecologies of sport and physical education. Because sport and physical education function in settings with significant contextual differences it is important to examine them as they naturally occur. The interrelationship of the four task systems and the influence of context to the four task systems represent the dynamic nature of learning environments.

Tasks Systems in Physical Education and Sport

How the task systems function in sport and in physical education will be examined in this section which will feature similarities and differences between physical education and sport. The accountability task system will be presented first, followed by the management task system, instructional task system, and student social task system.

Accountability Task System

In this section, the accountability task system will be addressed. Although it is often conceptualized as "driving" the task systems, I believe it is appropriate to conceptualize accountability as one of four interdependent and not easily separated systems that form the ecology of the learning environment. The accountability task system includes sets of practices (i.e., tasks) teachers use to hold students responsible and answerable for specific results and outcomes of an activity. Accountability is considered the consequence that a teacher uses to increase the likelihood of students' completing a given task, and used to establish and maintain student responsibility for behavior; task involvement; and student outcomes (Lund, 1992; Siedentop & Tannehill, 2000).

In Doyle's original formulation of the ecological framework he recognized that accountability "drove" the instructional task system. In the absence of accountability, he found tasks systems became very loose and at times were suspended. "Moreover, if accountability is not present; i.e., if answers are not required or if any answer is acceptable, then the task system itself is suspended" (Doyle, 1980, p. 103). I will make a case why accountability is not only vital to the ecology but why it can be conceptualized as its own task system with distinct elements and regular patterns for accomplishment.

First, an ecology is a group of natural organisms, environments, and systems that work together and interact with each other to find and maintain balance so the whole system can survive and continue (Laker, 2001). Within the task systems model, each system has a series of tasks that need to be accomplished for the system to be operable, which I believe includes a system of accountability tasks. Essential to the learning, ecology is the accountability that serves to regulate and balance the other task systems

(e.g., instructional, management, and student-social). This balance is achieved through a distinct set of accountability tasks, which are organized into a functionally related group of elements (i.e. task system). Accountability and the other three task systems form the complex whole of the learning ecology.

Second, Siedentop & Tannehill (2000) define a task system as "a regularized pattern for accomplishing tasks…composed mostly of the tasks that tend to recur frequently" (pg. 43). Accountability in its many forms is an ongoing occurrence in learning environments. These accountability systems are dynamic, continuous cycles that follow the sequence of activities and continue from day to day. Accountability tasks, like instructional, management and student social tasks require specific products, operations, and resources that characterize a task. For the purpose of this paper conceptualizing accountability as a task system helps to make clear the important interrelationship among accountability and the instructional, management, and student social task systems.

The final reason that accountability can be conceptualized as a task system is that accountability tasks can be functionally related as a task system by their purpose or goal in the learning ecology. The accountability task system includes a wide range of tasks from monitoring, accountability checks, and aversive control (e.g., running laps) to game performance and public posting of performance outcomes. Although these tasks could be classified as management (e.g., monitoring) or instructional tasks (e.g., game performance), when the goal is to hold students responsible and answerable for specific results and outcomes of an activity, then it is an accountability task.

Accountability tasks come in many forms that include tests for grades, teacher feedback, teacher praise and reprimands, active teacher supervision, challenges and

competitions, public recognition of performance, and keeping records of performance (Siedentop & Tannehill, 2000). In the managerial and instructional task systems, the systems are defined by what teachers hold students accountable for. In the student social task system, accountability is only for keeping within the boundaries defined by the managerial and instructional systems. Teacher intervention occurs when these boundaries are threatened ((Doyle, 1986b, 1985b; Siedentop & Tannehill, 2000). When conditions of high ambiguity and high risk exist then students' negotiations can threaten the momentum and direction of the PoA. Next several aspects of tasks (i.e., ambiguity and risk, student negotiations, task boundaries, task explicitness, and task congruence) that influence the direction and momentum of the PoA in relationship to the accountability task system will be addressed (James, 2001).

Ambiguity and risk. Instructional tasks are embedded in an evaluation system and accomplished under conditions of ambiguity and risk for students (Doyle, 1979b; Doyle & Carter, 1984). Ambiguity results from gaps in information about performance expectations of a task and the extent to which a precise answer can be defined in advance (Doyle, 1983a). Ambiguity refers to the degree of explicitness and consistency in defining tasks (Siedentop & Tannehill, 2000). Ambiguity also results from the inherent features of academic work (e.g., memorizing softball rules for a written test has low ambiguity, applying the rules in a game situation has high ambiguity as the performance expectations are more variable depending on what situations arise) (Doyle, 1983a).

Risk reflects the possibility of not being able to meet task demands on a particular occasion and is influenced by the degree to which evaluation criteria are employed (Doyle, 1979a; 1983a). Risk can be conceptualized on a continuum from low risk to high

risk. For example, ambiguous tasks always create risk for students until it becomes clear that the tasks are not difficult or that students will not be held accountable for performance (Siedentop & Tannehill, 2000). Thus, risk is closely connected to the accountability task system operating in classroom/practice settings as risk refers to the interaction among the ambiguity of the task, task difficulty, and the degree of accountability applied to it (Doyle, 1979a; Doyle & Carter, 1984; Siedentop & Tannehill, 2000). Often tasks in physical education create little risk for students, as they are only accountable for good behavior and dress (Matanin & Tannehill, 1994), whereas in sport game performance creates high risk (Griffin et al., 1998; Hastie & Saunders, 1992). As the level of risk increases, some students negotiate with teachers to reduce the risk. Risk in the sport setting is also influenced by the skill and experience of players.

Student negotiations. Students manage ambiguity and risk directly by negotiating to increase the explicitness of a teacher's instructions or to increase a teacher's generosity in the assessment of final academic products (Doyle, 1983a; Doyle & Carter, 1984)). Any task that is associated with a grade is considered more risky. With high ambiguity and high risk tasks, students push teachers to make tasks more explicit (e.g., reducing the ambiguity) by asking questions about content and procedures or by offering provisional answers to elicit clarifying reactions by the teacher (Doyle & Carter, 1984). In addition, students may slow down the pace of class, thereby reducing the risk. In physical education students negotiate by physically changing the task by modifying the task up or down in difficulty level (Jones, 1992).

A tension can exist between the students' need for reduced ambiguity and risk, and the teachers' desire for students to be involved in "understanding" type tasks. This

tension influences the momentum of the PoA. Teachers are pushed by students to choose between preserving conditions for students' self-direction in academic tasks and preserving classroom order (Doyle & Carter, 1984). To maintain student cooperation in managerial tasks teachers usually reduce risk involved in an instructional task by providing the prompts and resources students request. As a result, class momentum is maintained, yet the instructional task is often a modification with reduced expectations for the engagement in subject matter (Doyle & Carter, 1984).

Task boundaries. Tasks and task systems can be thought of as bounded by how loosely or tightly a task is defined (Siedentop, 1988). Loose boundaries occur when tasks are ambiguous and accountability is weak. Narrow and consistent boundaries of tasks and task systems occur when tasks are explicit and accountability is consistent. A task system with weak accountability serves to eliminate risk and thus makes ambiguity irrelevant, as students know they will not be held accountable (Siedentop & Tannehill, 2000). Narrow task boundaries with strong accountability support more on-task behavior and student learning (Siedentop, 1988).

In physical education instructional tasks present a more complex set of operations (i.e., threats to the PoA) than management tasks due to students' differences in ability and interests, the heterogeneity of classes and the physical environment (Siedentop, 1988). Effective teachers and coaches often plan for the heterogeneity of the class or team by presenting tasks with a range of task boundaries to accommodate different student abilities, thus maintaining accountability for instructional tasks (Siedentop, 1988; Hastie & Saunders, 1992). Grouping and space also have implications for maintaining task boundaries. Since whole group tasks are easier to monitor these often remain closer to the

stated specification. Supervising in large spaces or supervising small groups often results in more task modification (Siedentop, 1988).

Task explicitness. Task explicitness is related to the degree of ambiguity and risk and the teacher's consistency in defining tasks (Alexander, 1982; Jones, 1992; Marks, 1988; Tinning & Siedentop, 1985; Tousignant & Siedentop, 1983). Task explicitness conveys to students what they are to learn and how to learn a specific skill (Doyle, 1986b). Researchers found in one study of secondary physical education that explicit tasks led to a high rate of on-task behavior while implicit tasks were linked to higher rates of task modification to the point that any engagement in the task was accepted (Tousignant & Siedentop, 1983).

The teacher presents tasks to students explicitly or implicitly. The most explicit task includes information regarding the situation, conditions, and criteria for performance (Siedentop & Tannehill, 2000). Thus, a fully explicit task defines the conditions under which students are to perform, the performance expected, some standard by which to judge performance, and the consequences for performance (Alexander, 1982). Three types of explicitness have been identified: (a) an implicit task has little or no information provided, (b) a partially explicit task includes a general description of form, and (c) a fully explicit task, includes precise criteria to be used to determine the level of success (Tousignant & Siedentop, 1983). The total absence of task explicitness (i.e., an implicit task) results in a situation of "no task" structure. In this situation students are not sure what to do but anything is acceptable (Doyle, 1979a).

Researchers found that students respond successfully more often to fully explicit than to implicit tasks (Hook & Tannehill, 1995; Marks, 1988). Thus, students know what

they are expected to learn and what defines this learning. In physical education, students are often unfamiliar with the criteria for which they will be held accountable or the criteria that defines accomplishment (Jones, 1992; Silverman, Kulina & Crull, 1995). When tasks are not made fully explicit, students learn these aspects of the task only by how the teacher responds or by watching how peers respond (Siedentop, 1988; Siedentop & Tannehill, 2000). In sport, explicit and routine tasks characterize task presentation (Griffin et al., 1998; Hastie & Saunders, 1992).

Task congruence. Task congruence refers to how close student responses match task descriptions. Managerial and instructional tasks begin as stated tasks that are typically described verbally by the teacher (Siedentop & Tannehill, 2000). The actual task is defined as what the students are allowed to produce and will be accepted by the teacher (Doyle, 1986b; Jones, 1992; Siedentop, 1988; Son, 1989). Tasks tend to develop as a contingency between the teacher and the students (Alexander, 1982). The key operational variable is the reaction of teachers to the task efforts by students (Siedentop & Tannehill, 2000). A task may develop as follows: (a) teacher states task, (b) student response is either congruent or modified, (c) teacher supervises, (d) teacher responds to student task efforts, and (e) actual task develops (Alexander, 1982).

Several factors influence task congruence in physical education. Students become astute at knowing what the teacher will accept for a response. Son (1989) found that congruent student responses were more likely to be influenced by informal contingencies (i.e., student interest, nature of the activity, or aversive control) than by task specification or the formal accountability system. Another influence on task congruence is a student's previous experience or skill level (Doyle, 1983b; Son, 1989). Son (1989) found that high

skilled students modified a task down after 4-6 congruent responses, which allowed for socializing. The teacher would respond to the task effort appropriately with skill-related feedback, yet ignore the socializing. High task congruence was observed in several sport settings (Griffin et al., 1998; Hastie & Saunders, 1992).

The accountability task system functions in relationship to the levels of ambiguity, risk, student negotiations, task boundaries, tasks explicitness, and task congruence to influence the direction and momentum of the PoA (James, 2001). In a robust PoA in both physical education and sport, students can be subject to an evaluative context that includes, formal, informal, pseudo and embedded systems of accountability (Doyle, 1979b; Lund, 1992; Siedentop, 1988). Each classification of accountability tasks, and the construct of instructional alignment, which foregrounds assessments as a key aspect of the instructional process, will be addressed in the following section.

Formal accountability. Formal accountability includes making permanent products such as tests, papers, and graded records of skills (Tousignant & Siedentop, 1983). Formal accountability for academic work is tied to a student grade and is part of the performance for grades exchange accountability structure (Becker, Geer, Hughes, 1968 as cited in Doyle, 1986b; Siedentop, 1988). The primary grade exchange in classroom settings is for instructional outcomes (Doyle, 1986b).

Instructional outcomes in physical education are rarely assessed and are seldom used as a criterion to determine students' grades (Matanin & Tannehill, 1994). In physical education, it is typical for students to be held accountable (i.e., graded) for managerial criteria such as dress, attendance and effort/participation (Imwold, Rider, & Johnson, 1982; Matanin & Tannehill, 1994; Tousignant & Siedentop, 1983). Physical

educators do agree in principle that active participation, knowledge, and skill should be the criteria for student grades in physical education. Researchers found that despite these beliefs, there is limited time spent on assessing student knowledge or skill (Matanin & Tannehill, 1994).

To move beyond the practice of evaluating students on managerial categories and cooperation a wealth of successful approaches have been documented (Lund, 1992). First, ongoing skill testing throughout a unit of instruction serves as a means of feedback for both the student and the teacher. Also, students have the opportunity to practice the tests so they have a chance to improve their skill along with their grade. Second, teachers can give students assignments and expect that to be successful in physical education students will need to practice and take time at home with assignments. Third, accountability such as public recognition, class competitions, bonus points, and teacher challenges can hold students accountable and can be used to help achieve program goals.

In sport, a formal accountability system strongly linked to the instructional task system has been identified (Griffin et al., 1998). The most obvious type of formal accountability is performance in game play (Hastie & Saunders, 1992). Researchers found that a competitive system (i.e., match play system) reflected a distinct set of contingencies that involved practice effort and quality of game playing time. Signs of success and effort in practice became secondary reinforcers (e.g., playing time) related to competition. When paired with established secondary reinforcers (e.g., match play) they too had reinforcing capabilities. Coaches could easily select or deselect an athlete for a match or playing time and as a result match play served as a powerful set of contingencies that does not exist in the physical education setting (Griffin et al., 1998).

The rewards for good performance or the consequences of poor performance are part of the accountability system that coaches used to maintain the high quality work level at practices (Griffin et al., 1998; Hastie & Saunders, 1992). Many coaches also keep detailed statistics during game-play and report these to players during post-game meetings. Also, game play results often become public as statistics are frequently reported to the media. Public recognition and the public performance during game play serve as powerful reinforcers and support the accountability system. Coaches also use challenges, competition, timed trials or number of trials as a means of formal accountability during practice sessions (Griffin et al., 1998).

Informal accountability. Informal accountability plays a significant role in the accountability task system. Informal accountability refers to measures that do not directly affect student grades. Informal accountability rather than formal accountability is the dominant mode of accountability in physical education (Lund, 1992; Siedentop, 1988). Informal accountability comes from daily interactions between students and the teacher/coach (Griffin, 1991). Informal accountability includes, monitoring by observing, active supervision, officiating, or by correcting performance (Tousignant & Siedentop, 1983). Other informal measures of accountability used in physical education include public recognition, feedback on errors, and even aversion (Lund, 1992; Son, 1989).

Students' responses to a task are based in part on the degree to which teachers actively supervise (e.g., informal accountability) their students (Hastie & Saunders, 1991, 1992; Jones, 1992; Lund, 1992; Schuldheisz & van der Mars, 2001; Tinning & Siedentop, 1985; Tousignant & Siedentop, 1983). Active supervision includes teacher behaviors such as movement, positioning, visual scanning, interactions with students, and

periodic participation or modeling. Active supervision was recently identified as a strategy that increased student involvement in moderate to vigorous physical fitness activities (Schuldheisz & van der Mars, 2001).

Monitoring (i.e., to watch, observe, or check for a specific purpose) was identified as a primary factor of task involvement in physical education. If the teacher was watching then students would engage in the task as stated (Hastie & Saunders, 1991). Inadequate supervision can result in the temporary suspension of the accountability system, and any work that takes place depends on student interest and motivation rather than the goals the teacher has for the class (Siedentop, 1988).

Although sport settings have been characterized by strong formal accountability structures associated with the competitive system, the role of informal accountability should not be overlooked. Most of the sport season is spent in practice sessions, where athletes work hard to impress the coach to earn valuable playing time or a starting position, thus their first task is to determine what level of effort and quality of performance the coach will acknowledge and accept (Hastie & Saunders, 1992). Measures of informal accountability include coach's praise to players, accountability checks, activity and contrived consequences, aversive activities, and allowing certain players to finish a drill early for good work, or conversely, making a group of players continue a drill until they reach a certain standard (Griffin et al., 1998; Hastie, 1993; Hastie & Saunders, 1992).

The use of aversive activities (e.g., the use of exercise as punishment) has been documented in both physical education and sport settings despite identification as an inappropriate practice in physical education (Griffin et al., 1998; Pagnano & Langley,

2001). Aversive activities were observed minimally in a high school volleyball sport setting. This form of punishment was described as a "token" punishment, yet did occur in a climate in which athletes' responded to their coach in a submissive manner (Griffin et al., 1998). I think that it is important to also examine not only what teachers and coaches do in relationship to using aversive activities, but also what coaches "threaten" to do in relationship to aversive activities. Although the actual use of this type of accountability task may be minimal it may play a more dominant role in the accountability task system than previously documented.

Pseudo-accountability. Pseudo-accountability occurs when teachers only hold students accountable for good behavior and minimal participation (Lund, 1992). The instructional task system is suspended as a result of the teacher's failure to hold students accountable for instructional tasks despite what the teacher is telling students (Lund, 1992). In physical education use of pseudo-accountability is widespread, good behavior becomes the task of the class because it is the only task that teachers' hold students accountable (Evans et al., 1999; Siedentop et al., 1994; Ward et al., 1999).

In the context of sport, pseudo accountability has not been documented. Researchers have found that good behavior and cooperation with the coach was an expectation of team membership and was not negotiated between the athletes and coach (Griffin et al., 1998; Hastie, 1993; Hastie & Saunders, 1992). In a junior elite sport setting, athletes were expected to be on time, ready to play, and expected to follow the coaches' directions explicitly (Hastie & Saunders, 1992). I believe that the absence of pseudo-accountability may be related to the embedded accountability of the sport context in addition to the expectations set by coaches.

Embedded accountability. Content-embedded accountability includes the accountability for student performance in managerial, instructional and student social tasks embedded within the nature of the activity structure (Doyle, 1986b; Hastie, 2000). That is, accountability intrinsic to the manner in which activities develop and the goals to be achieved (Hastie & Siedentop, 1999). Examples of content-embedded accountability in physical education include small groups of students planning a half-day bicycle trip and then actually taking the trip to reach the destination successfully, or a health-fitness class that has established collective goals to achieve by the end of the semester, and has regular weekly progress checks toward those goals, and some rewards and celebrations are planned when they are achieved (Siedentop & Tannehill, 2000).

Evidence of content-embedded accountability is found in both sport and physical education (e.g., sport education) (Griffin et al., 1998; Hastie, 1995, 2000). Interscholastic sports share some of the intrinsic accountability features that are embedded in the sport education model. For example, in sport and in sport education affiliation (e.g., being a member of the team) is an intrinsic feature of each context. In sport, not all athletes are selected and positions are limited on most teams. Athletes are held accountable to the coach's tasks due to their desire to maintain a team affiliation and to make a positive impression on the coach so they will have the opportunity to compete during game play. Also, athletes must work together to achieve success as a team. In sport education, all students participate in game play, but their desire to make positive contributions to the team effort provides the impetus to practice hard and make improvements. Thus, the desire to contribute to the team effort in sport education is parallel to the athlete working hard in practice to gain the coaches approval and desired game playing time.

Since sport education is a curriculum model designed to provide students with an authentic, in-depth, and educationally rich sport experience within physical education, parallels to sport are evident (Siedentop, 1994). As in sport, students who participate in a sport education unit become members of teams and maintain that affiliation throughout the season (Siedentop, 1994). In both settings, in order for a team to be minimally successful they must interact together in ways that optimize team performance. It is to a team's benefit to work together and to improve the skill of all team members. In addition, the evaluation of fair play or students' commitment in a sport education lesson is often included in the record keeping toward team standings (Hastie, 2000). Formal competition in sport education and sport leads to a culminating event (e.g., class tournament play in physical education, league, regional or state competition in sport) that is festive in nature and serves to emphasize and honor the rituals and traditions of sport (Siedentop, 1994).

Both sport and sport education have content embedded accountability in that game play competition "counts" and in the public nature of individual and/or team statistics. Hastie (2000) noted that content-embedded accountability served to bring the student social task system in alignment with the desired outcomes for the class in a sport education unit of instruction. Thus, content embedded accountability supported the instructional focus of the learning environment.

Another feature of sport education and sport is competition. Competition embedded in the context of sport and sport education allows athletes to test themselves, or their team against others, or against the clock to demonstrate their competence and to reach goals. Public record keeping, a sport tradition, helps define the standards and provide goals for players and teams (Siedentop, 1994). The strongest and most consistent

motivations for young athletes are affiliations (the festivals) and excellence (the pursuit of competence) (Siedentop, 1981). The festive, public nature of interscholastic sport and sport education holds students and athletes accountable to a high level of performance.

Hastie (2000) foregrounds the central meanings associated with competition as key aspects of content-embedded accountability associated with the student social task system in sport education. The meanings associated with competition, in sport and in sport education, are powerful factors that contribute to an individual's competence and sense of belonging to a community. I would extend the meaning of competition to include the notion that competition contributes to a team identity. Competition then becomes a shared experience and contributes to team cohesion (Carron, 1982). Strong team identification becomes a source of self-esteem and membership in this cohesive group is socially satisfying for the student/athlete.

Instructional alignment. The heuristics of instructional alignment is a useful lens to examine accountability and the articulation of assessments, instruction, and program goals at a macro level (i.e., school level) (James, 2001). Instructional alignment is defined as the extent to which the goals of instruction, the instructional process, and assessment align with the underlying values of a curriculum or program (Cohen, 1987; Siedentop & Tannehill, 2000). Instructional alignment serves as an important accountability measure related to the assessment of instructional tasks, and the relationship of those instructional tasks to overall program goals (James, 2001). Achievement of program goals are evident as Cohen (1987) found that well-aligned instruction produces achievement results that are two to three times stronger than in non-aligned instruction. In one physical education context, when intended outcomes,

instructional tasks, and assessment matched then the achievement of the instructional goals in physical education and sport also occurred (Ward et al., 1999).

The construct of instructional alignment suggests that accountability functions at the classroom level and the school level. Alexander et al. (1996) note, "It is dysfunctional program structures (rather than deficits in teaching skills) that are most to blame in denying teachers access to significant subject matter learning targets (pg. 23). From this perspective, instructional alignment is central in the teaching and learning environment. In this section, the relationship of program goals to assessments in physical education and sport will be discussed.

Sport is frequently enacted in a context with strong instructional alignment. Game play statistics and outcomes serve as an assessment of the instructional process and coaches make adjustments in training to achieve their intended goals. Also, in sport, players, coaches, and fans frequently share program goals (Hastie & Saunders, 1992). Agreement exists among members of the sport community that at least some of the program goals relate to success in competition (Miracle & Reese, 1994).

In physical education, assessment and agreement on program goals are uncommon (Hollihan, in press). In one secondary physical education study, accountability, evaluation, assessment and grading did reflect program goals; however the appropriateness of the goals were questionable (Matanin & Tannehill, 1994). This program appeared to provide enjoyable activities that resemble structured recreation, rather than physical education.

In physical education, program goals are often consistent with the philosophy of the multi-activity curriculum, which is to expose students to a wide variety of activities

(Steinhardt, 1992). Gains in motor performance are modest at best through participation in a multi-activity program (Ward et al., 1999). This brief exposure does not afford students the opportunity to practice relevant skills and strategies through extending and refining tasks in situations similar to those in which they will be used (Siedentop & Tannehill, 2000). Researchers have suggested that how the multi-activity curriculum is enacted in schools is a barrier to achieving meaningful goals in the instructional task system (Ward et al., 1999; Ward, Doutis et al., 1999).

Instructional alignment was an underpinning of a successful middle school physical education program reform effort (Ward et al., 1999). In this school, four broad outcomes (i.e., social skill development, moderate physical activity, motor skill development, and tactical knowledge development) were identified for the physical education program based on student needs. Next, instructional activities and assessments were tailored to be congruent with these broad outcomes and were integrated into the program. Results indicate that a strong PoA developed through this reform effort (Ward et al., 1999). Similar PoAs have also been described in sport education units of instruction that include program goals that correspond with instructional activities and assessments (Carlson & Hastie, 1997; Hastie, 2000).

"Teach what you assess and assess what you teach" is an adage familiar to educators. Physical educators often neglect to carefully align outcomes, instruction, and assessments. Cohen (1987) suggests that to realize instructional alignment you need to know a great deal about the activity you are planning. Physical education teacher/coaches have extensive content knowledge in their coaching areas, which could be used to facilitate instructional alignment in physical education and contribute to a robust PoA.

In summary, the accountability task system includes formal, informal and content-embedded accountability tasks. Ambiguity, risk, explicitness, boundaries, and congruence of tasks all have implications for how the accountability task system will interact with instruction, management and the student social task system to produce the PoA. Finally, instructional alignment serves as an important accountability measure related to the assessment of instructional tasks, and the relationship of those instructional tasks to overall program goals.

Management Task System

A well-managed class has implications for students and teacher/coaches as minimal levels of classroom order are needed to teach and learn. Researchers have shown that management is central to the classroom process (Doyle, 1986b, Romar, 1995; Siedentop, Doutis, Tsangaridou, Ward & Rauschenbach, 1994; Supaporn, 2000). For instance, teacher effectiveness is often judged based on the teacher's ability to handle misbehavior and to maintain appropriate student behavior (O'Sullivan & Dyson, 1994; Supaporn, 2000). Also, teacher satisfaction is associated with the ability to manage a class effectively. Many teachers leave the profession due to frustrations related to classroom control (Luke, 1989). Finally, students benefit from a well-managed class, as more time can be devoted to instruction and students can learn in a peaceful, positive environment (Siedentop & Tannehill, 2000).

A managerial task relates to the organizational and behavioral aspects of a class, all the non-subject matter functions needed for students and the teacher to co-exist over a period of time. The management task system establishes the structures through which the class becomes a predictable and smoothly operating system (Siedentop & Tannehill,

2000). The management task system establishes the limit for behavior and the expectations the teacher holds for students. Management tasks include organizing classroom groups and materials, gaining and maintaining student compliance, establishment of expectations of class rules and routines, monitoring, and pacing classroom events (Doyle, 1986b). The managerial tasks specific to physical education include (a) the requirements related to attendance (i.e., to be present and punctual), (b) the tasks associated with the obligation to dress appropriately for participation in physical education, (c) the tasks labeled "being a member in good standing" (e.g., not disrupting the class routine, obeying the class rules), and (d) the management of materials and space (Siedentop, 1988; Tousignant & Siedentop, 1983).

Four categories of student work involvement have been identified in physical education (Tousignant & Siedentop, 1983). These include: (a) students engaged with the task-as-stated-by-the–teacher, (b) students engaged in a modified-task, (c) students engaged in deviant off-task behavior, and (d) students engaged as a competent bystander. A powerful finding from this study was that students who did not want to engage in the stated task used two strategies to "hide out," which included modification of a task and becoming a "competent bystander." Within the management task system competent bystanders stay on-task in relationship to management but avoid participation in instructional tasks.

The primary objective of the management task system is the establishment of order in the classroom. Kounin (1970) and his colleagues conducted a programmatic line of management research in a series of ten studies that explored various grade levels and educational contexts. Kounin began this line of research to explore the "ripple" effect he

had observed after he reprimanded a student in class and then noticed subsequent disturbances. Eventually, his research moved away from disciplinary techniques to explore work involvement and preventive management (Kounin, 1970). The major findings from this line of research focused on what teachers did across time to achieve work involvement. The researchers were eventually able to demonstrate that involvement was a function of how teachers manage group dimensions and structures in classrooms rather than how they dealt with individual behavior.

Kounin (1970) identified six categories of teacher behaviors that contribute to successful class management as a result of video analysis of 24 elementary classrooms. These well-known categories are proactive strategies used by teachers to develop and maintain a positive on-task climate. They are defined as follows: (a) withitness: the teacher communicating that he/she knows what is going on regarding student's behavior (i.e., "eyes in the back of the head"), (b) overlapping: the teacher attending to two issues simultaneously when they are present, (c) momentum: the teacher keeping the pace of the class free of slow downs, (d) smoothness: the teacher avoiding breaks in the class and his or her ability to manage movement in the class, (f) group alerting: the teacher is able to maintain a group focus during large group presentation, and (g) accountability: the teacher holding students to an acceptable level of performance.

According to Kounin (1970) creating effective classroom ecology does not require punitiveness, rather:

> One must conclude that the dimension of movement management is a significant dimension of classroom management and that it is more important to avoid actions that slowdown forward movement than to maintain its smoothness. Techniques of movement management are more significant in controlling deviancy than were the techniques of deviancy management themselves. Preventive management is more important than remedial management (pg. 53).

Preventive classroom management requires planning and instruction by the teacher and practice by the student. The goal is to develop a system that requires students to do a good deal of self-management, and that frees the teacher to deal with learning-related issues rather than managerial issues (Siedentop & Tannehill, 2000). Preventive management teaches students the appropriate way to behave within the managerial and the instructional task systems (Siedentop & Tannehill, 2000).

One of the most important aspects of preventive management is the establishment of rules, routines, and expectations set at the beginning of the school year through practice and repetition. Teachers who spend time during the first few weeks of school teaching rules and routines have an easier time managing and have students that learn more (Kounin, 1970; Fink & Siedentop, 1989; O'Sullivan & Dyson, 1994). In physical education, management tasks are typically made explicit at the onset and teachers monitor students closely often praising compliance and quickly desisting non-compliance (Fink & Siedentop, 1989). Researchers found that students learn to operate within a range of acceptable physical responses, which relates to the teacher's level of supervision (Jones, 1992).

In physical education students sometimes learn that the management system defines the tasks of a class (Hook & Tannehill, 1995; Lund, 1992; O'Sullivan & Dyson, 1994). The management task system in physical education often develops as a contingency (i.e., negotiation) among the students and the teacher. The teacher holds students accountable for good behavior, while reducing the instructional demands (Lund, 1992). Students comply, and low levels of off-task behavior occur in many classes

(Godbout, Brunelle, & Tousignant, 1983). In a study with elementary physical education students, Jones (1992) found students were on-task frequently (83.7%) in relationship to management tasks yet they were not very successful in performing motor skills (47% success). This may occur because the complexity of the environment was controlled, as subsequent to managerial tasks students spent time waiting (31%-43%) or waiting in line (29%-30%) as teachers gave information about managerial tasks (Jones, 1992). On-task management behavior and low success rate within the instructional task system point to a weakness in some physical education programs. The low success rate indicates that students may not be involved in meaningful tasks that contribute to student learning. Although another perspective is that low off-task behavior may be associated with the explicit nature of management tasks in physical education (Jones, 1992).

Off-task behavior (i.e., misbehavior) has been found in physical education classrooms that lack effective rules and routines. Supaporn et al. (2003) noted that student misbehavior was the result of a casual PoA. Poor delivery of instructional tasks, coupled with loose accountability, and a student social task system that took precedence over instructional and managerial tasks created a casual environment that allowed student misbehavior to disrupt the direction and momentum of the PoA.

In sport, the management task system is subject to much less negotiation. Task modifications by athletes were rare (Griffin et al., 1998; Hastie, 1993; Hastie & Saunders, 1992). In several sport contexts, compliance with management tasks occurred as athletes engaged in robust instructional tasks; practice took on a businesslike air, athletes adhered to strict time schedules, and off-task behavior was infrequent (Griffin et al., 1998; Hastie,

1993; Hastie & Saunders, 1992). In two studies, Hastie and Saunders (1992) and Griffin (1991) respectively reported no disruptive player behavior.

The strict adherence to management tasks in sport is related to several factors. First, expectations for task performance often differ between the physical education and sport setting which include the (a) quality of work accepted, (b) consistency of responses, and (c) variety of responses. Expectations vary from high quality, businesslike work in sport (Griffin et al., 1998) to instructional pseudo-accountability often found in physical education when teachers hold students accountable for good behavior and not for instructional tasks (Lund, 1992). Some teachers in physical education are satisfied with minimal participation as the "busy, happy, and good" adage exemplifies (Placek, 1983). Pseudo accountability in sport settings has not been identified (Griffin et al., 1998; Hastie & Saunders, 1992).

Second, compliance to management tasks may also relate to the unique characteristics of interscholastic sport. Coaches are often required to produce winning teams. To hold athletes accountable for good behavior and not to a high level of performance would be counter-productive to producing winning teams. In the sport setting coaches expect a high level of effort, with a major focus on quality performance as success in coaching is often measured in wins and losses (Griffin et al., 1998; Hastie & Saunders, 1992).

In summary, maintaining the managerial task system is essential to a robust PoA because researchers have found that students learn more when time is spent in productive work rather than confusion and misbehavior (Doyle & Sanford, 1985). In sport, athletes comply with management demands and rarely exhibit off-task behavior (Griffin et al.,

1998; Hastie, 1993; Hastie & Saunders, 1992). In physical education, compliance with management often comes at the expense of the instructional task system. As a result, the management task system has a different role in the PoA in sport and physical education.

Instructional Task System

Researchers in physical education have utilized the ecological framework to explore the instructional task system in physical education and sport (Alexander, 1982; Fink & Siedentop, 1989; Graham, 1987; Griffin et al., 1998; Hastie, 1993; Hastie & Saunders, 1992; Jones, 1992; Son, 1989; Lund, 1992; Marks, 1988; Tousignant & Siedentop, 1983). The instructional task system consists of all the learning tasks that teachers or coaches ask students to participate in, such as taking part in drills, playing in games, doing fitness activities, problem-solving, and taking part in activities designed for social or affective outcomes (Siedentop & Tannehill, 2000). An instructional task relates to the subject-matter activity of physical education and sport, and the intended learnings students are to acquire by participating in the instructional activities (Siedentop & Tannehill, 2000). In this section, the organization of instructional tasks, and characteristics of instructional tasks as they relate to physical education and sport will be addressed.

Organization of instructional tasks. Instructional tasks in physical education and sport are presented to students in a series of progressions within a lesson, unit or season. Three models that represent content development will be presented that include Rink's (1998) model for task progressions, Rink's (1998) Model of Games Stages, and Griffin, Mitchell, & Oslin's (1997) Tactical Games Approach. These models are presented as

frameworks for the design of appropriate instructional tasks in physical education and sport as skills and tactics can be linked to the game context.

Rink's (1998) model for developing progressive instructional tasks is widely used in physical education. Rink developed four categories (e.g., informing, refining, extending, and applying) to describe instructional tasks that relate to skill development (see Table 2). This task progression includes initial tasks that serve to inform the student of a new skill or strategy. The next tasks serve to refine the quality of the performance, to extend the performance by changing it slightly, and to apply the skill or strategy.

Refining tasks are one of the most neglected tasks in teaching physical education, yet the refining (i.e., focus of quality movement) extending (i.e., focus on increased task complexity) cycle, repeated many times over, forms the central core of content development in physical education (Rink, 1998; Siedentop & Tannehill, 2000). The importance of the refinement-extension cycle lies in the opportunities that the cycle provides for student/athletes to improve the technical quality of skill, and to practice in situations of increased complexity (Rink, 1998).

In a study with elementary physical education students, Jones (1992) found that students were not asked to perform refining tasks to improve or perfect skill performance, but rather spent time reviewing basic skills and in game play. In another study, researchers found that students were only asked to perform two different tasks and were frequently asked to repeat an existing task in a middle school lacrosse unit (Ward, Barrett, Evans, Doutis, Nguyen, & Johnson, 1999). This restricted number and type of instructional tasks did not include the necessary extensions and refinements to produce significant gains in motor performance (Ward, Barrett et al., 1999). Fully explicit refining

and review tasks were found, however, as part of an efficient task progression used by an elementary physical education student teacher (Hook & Tannehill, 1995).

In the sport setting task progressions that lead to learning outcomes were evident. Task progressions, extension tasks, and more refinement tasks within each practice session were documented (Griffin et al., 1998; Hastie & Saunders, 1992). In a high school volleyball study, instructional tasks included many extending (49%) and refining tasks (28.4%), and minimal time spent in game or scrimmage play (12%) during practice (Griffin et al., 1998). In other sport settings, scrimmage play (e.g., applying task) represented 51% to 59% of the total practice time, pointing to the contextual nature (e.g., activity, setting) of practice task organization (Ormond, 1988).

Another way to examine content progression of instructional tasks in physical education is through Rink's (1998) Model of Games Stages (see Table 2). The Games Stages model categorizes instructional tasks into four stages important to game play. Within each stage tasks are presented in a gradual progression that will lead students to an increased level of mastery and control for game play by changing the conditions of the task. The development of skill in stage one involves experiences that provide the opportunity to develop control of a ball (i.e., object). The concern during Stage 1 is with individual skills such as sending, receiving, and carrying and propelling actions. In Stage 2 the focus is on using skills in combination with each other and relating movement to others in cooperative ways. The focus of Stage 3 is on basic offensive and defensive strategies. The last stage, Stage 4, includes full-sided games (Rink, 1998). Researchers found that the most neglected stages of development of games skills in physical education have been Stages 2 and 3 (Rink, 1998). Students practice isolated skills and

then move directly to game play without the tactical awareness to be successful in game play (Griffin et al., 1997). Further research in sport and physical education needs to be conducted to examine factors that influence the organization of instructional tasks for optimal game performance.

Instructional tasks have also been organized based on their level of tactical complexity (Griffin et al., 1997) (see Table 2). The primary focus of the tactical games approach is on the strategic aspects of performance, rather than on skill components of the game (Siedentop & Tannehill, 2000). Knowing what to do and when to do it become the focus of content development. This approach emphasizes components of game performance beyond execution of motor skills; this includes decision making, providing support, marking or guarding, covering teammates, adjusting position as the game evolves, and using a base position to cover the field/court (Griffin et al., 1997).

Tactical problems for (a) invasion games, (b) net games, (c) fielding/run scoring games, and (c) target games have been documented (Griffin et al., 1997). Instructional tasks are organized based on the games classification system (i.e., invasion, net/wall, etc.) and the specific skills and movements of a game such as soccer. In an invasion game tactical problems include maintaining possession of the ball, defending space, preventing scoring, and attacking the goal. The organization of instructional tasks around levels of tactical complexity requires that student development needs to be considered. As students' level of tactical awareness increases, the level of tactical complexity of the instructional tasks increases. Thus, instructional tasks are organized based on the appropriate level of tactical complexity, rather than on what technical skills a teacher decides to teach in a unit.

Task presentation is another part of content development and an important aspect of instruction. Task presentation is significant because it communicates to the learner what they are to do and how they are to do it (Rink, 1994). Task presentations of more effective teachers involved clarity, demonstrations, and appropriate delivery of cues (Rink, 1994). Researchers have not identified the relationship of contextual variables to specific characteristics of task presentation; differences may exist in effective task presentation in sport and physical education.

In summary, the three models for content development can be structured to develop both skill and game tactics and should be integrated with game play at the appropriate level of complexity. The three approaches to content development provide a framework to examine instruction to determine if students are involved in tasks that contribute to important learning. Skill development out of context for long periods of time followed by game play is often seen in physical education; however it is an inappropriate approach to teaching games and sport (Rink, 1998).

Instructional task characteristics. The characteristics of instructional tasks in physical education and sport have significant differences. Instructional task development in physical education and sport will be examined in relationship to task (a) explicitness, (b) engagement, and (c) boundaries.

First, in physical education instructional tasks are usually communicated as partially explicit or implicit (Tinning & Siedentop, 1985; Siedentop et al., 1994). In the instructional task system, task boundaries are less explicit than in the management system (Jones, 1992). I believe the ambiguous (e.g., implicit or partially explicit) nature of tasks in physical education may be connected to the "no sweat attitude" that has been adopted

by some physical educators (Siedentop et al., 1994). Teachers and administrators are often reluctant to hold students accountable for psychomotor skills (Lund, 1992). Thus, tasks in physical education are ambiguous by design so students and teachers do not challenge a system that holds cognitive skills in a higher regard. Also, tasks are ambiguous because physical educators are not clear about what we want students to learn in physical education. When tasks are not fully explicit educators leave room for negotiation (i.e., verbal, physical or social) while order is maintained. Researchers need to explore the perspectives of physical educators as they relate to their descriptions of instructional tasks to gain more insight into this issue.

Implicit tasks do not include instructional tasks that become established structures (i.e., routines), such as warm-ups or drills that students have practiced and require only a prompt to initiate (Jones, 1992). Because routine tasks have been practiced, situation, conditions and criterion are established. Thus, students are aware of the performance expectations. Establishing routine tasks allows the teacher freedom to interact socially and devote individual attention to students (Jones, 1992; Son, 1989).

Several researchers studied physical education teachers who used explicit tasks (Lund, 1992; Jones, 1992). In an elementary physical education program two teachers communicated instructional task in fully explicit or partially explicit statements (56% and 60% respectively). Students tended to stay on the instructional task. Lund (1992), examined a secondary physical education teacher (Mrs. Brown) who explicitly stated tasks, demonstrated skills, and identified specified critical elements that needed to be present for acceptable performance on three skill tests. Mrs. Brown's students' response rates were high (52%-61%) and correct (67%- 91%), as students were aware of task

expectations. Task explicitness was also associated with student achievement when learning the forearm pass in volleyball. When task descriptions included the outcome, situation and criteria there was a positive relationship to student achievement (Silverman et al., 1995).

The second task component to consider in physical education is task engagement. The level of student engagement in physical education with instructional tasks and the appropriateness of instructional tasks have implications for student learning. Jones (1992) reported students' success rates were at 47% for performance of motor skills. For low skilled students successful task involvement was more problematic than for more highly skilled students. Graham (1987) studied an eighth grade volleyball unit and found that low-skilled students had lower success rates than higher skilled students even when the teacher provided differentiated instructional tasks.

The third component that influences the instructional task system in physical education is task boundaries. The boundaries of the instructional task system are often set at the place where the teacher uses desists, or redirects students responding (Siedentop, 1988). In classrooms, when academic tasks are perceived as difficult or ambiguous, students often negotiate with teachers to modify the tasks. One student response to instructional tasks is to modify the task up or down to meet their individual challenge needs (i.e., making it more difficult if it is too easy) (Siedentop, 1988; Tousignant & Siedentop, 1983).

Task boundaries were challenged in a study of two elementary physical education classes, as students were observed negotiating tasks both physically and verbally (Jones, 1992). Negotiation strategies were used to modify tasks to what the students actually

wanted to do, and task were modified up (i.e., 1% and 7%) and down (i.e., 8% and 7%) (Jones, 1992). Students learned to function within the range of acceptable responses based on how the teacher responded. In this study, Jones (1992) observed that both teachers allowed tasks to be modified if they felt these changes would facilitate skill acquisition and not disturb class management. Little evidence, however, of task negotiation was noted in a study of 11 high school physical education teachers (Siedentop et al., 1994). Findings showed that instructional tasks were not perceived as difficult for students and didn't provide students' opportunity to participate in "challenging and relevant tasks" essential to the learning process (Hastie & Pickwell, 1996).

Student negotiation of task boundaries in physical education may be inconspicuous due to the complexity of the learning environment (Jones, 1992). Some students seek to avoid participation in the instructional task (Tousignant & Siedentop, 1983). "Competent by-standers" behave appropriately within the managerial task system; however, they avoid participation in the instructional task system by not taking turns after standing in line or by attaching herself/himself to a good player during game play. Thus, the student appears competent to the teacher, and to be an actively involved and even a well skilled player (Siedentop & Tannehill, 2000).

Negotiations of task boundaries are evident in the expectations teachers have for student engagement. Recently, the instructional practices of physical educators were conceptualized on a continuum of instructional rigor, which provides an illustration of instructional tasks from more rigorous to less rigorous. This continuum illustrates the pressure that students exert on the instructional task system through negotiation of task boundaries (Hastie, 2000). Essentially, teachers form treaties with students to gain and

maintain student cooperation and teachers operate in a "curricular zone of safety" (Rovegno, 1994). In the curricular safety zone, teachers' present instructional tasks in which students will engage, although at lower levels than the teacher really wants (Hastie, 2000). This safety zone features cooperation among the students and teacher, which has been achieved by sacrificing instructional demands and accountability for little disruption in the management system (Rovegno, 1994).

In two studies of secondary physical education the instructional ecologies have been described as "casual" with student making only modest psychomotor gains at best (O'Sullivan et al., 1994; Supaporn et al., 2003). In one secondary physical education class a rigorous instructional ecology was thought to interfere with the enjoyment of physical education and thus inhibit participation in life-long activity (O'Sullivan et al., 1994). In contrast, Lund (1992) found that when students were held accountable for instructional tasks they were found to respond with greater frequency and with more success. Furthermore, students' GPA's did not drop when they were held accountable for psychomotor tasks (Lund, 1992).

In my opinion, casual ecologies in secondary physical education cannot be viewed as appropriate pedagogy even if this casual ecology is in alignment with a teacher's value orientation or program goals. Several researchers have explored physical education and sport settings with robust instructional ecologies that support student learning, enjoyment, or a desire to participate in physical activity (Carlson & Hastie, 1997; Griffin et al., 1998; Hastie, 2000; Lund, 1992; Ward, Doutis et al., 1999). These ecologies demonstrate that instructional robustness and enjoyment of physical activity are not mutually exclusive.

In contrast to the physical education context, in sport more instructional tasks are fully explicit, that is they are specific and clearly defined (Griffin et al., 1998; Hastie & Saunders, 1992). Coaches also use "prompts" such as "rhythm hitting" to initiate routine practice tasks which communicate the task completely because they have been practiced regularly (Griffin et al., 1998). The explicit nature of instructional tasks reduces the ambiguity and risk in practice settings. In sport, drills are presented with verbal descriptions or demonstrations (Griffin et al., 1998; Hastie & Saunders, 1992). Also, match play creates a situation with high risk when playing against more competent opponents (Hastie & Saunders, 1992).

Expectations for task performance in the sport setting differ from that of physical education (Griffin et al., 1998; Hastie & Saunders, 1989, 1992). In two studies, players completed tasks as stated by the coach and rarely made task modifications. The focus was clearly on quality work in the sport setting. The emphasis on quality performance was evident as tasks were reviewed regularly and some tasks became routine (Griffin et al., 1998; Hastie & Saunders, 1992). The predominance of coach centered and initiated drills support the focus on quality performance, however the coach centered focus diminished player opportunity to respond (OTR) rates (Griffin et al., 1998).

In sport, two unique instructional roles have been observed during practice settings, which include role specific instructional tasks and training roles. First, students in physical education participate in all roles; athletes on a sport team are allowed to specialize by position (Griffin et al., 1998; Hastie & Saunders, 1992). Coaches often set separate instructional tasks for different players. For example, in one study a group of setters would practice as a group separate from the rest of the team who were practicing a

drill not related to setting. Also, certain players (i.e., setters) took on a specific role in a task while other players (i.e., hitters) were responsible for other parts of the drill (Hastie & Saunders, 1992).

In addition, athletes on a sport team often have training roles that are primarily for the enhancement of practice options of other players. Thus, player responsibilities during practice range from actual engagement in practice tasks to a supportive role, such as ball collector or feeder (Griffin et al., 1998). Thus, position and role have an influence on how players participate in practice tasks in the sport context (Griffin et al., 1998; Hastie & Saunders, 1992).

In the sport setting there is a common uniformity in the responses of players to a task (Griffin, 1991; Hastie & Saunders, 1992). Task modifications were rarely seen. There are two rationales for this response. First, coaches often make different instructional tasks for different players based on position, ability, or other individual factors. Differential instruction in sport may be related to coaches knowing the specific abilities of each athlete. Second, the absence of task modifications may be due in part to the variety of responses that the coach accepts for players based on the coach's in-depth knowledge of each player's individual skill level. In sport, tasks with intratask variation are presented to accommodate varying skill levels. For example, Hastie and Saunders (1992) found the coach in a junior elite volleyball setting would expect some players to "pass the ball to the net," while others were expected to "try and get to the ball and stay on their feet," which represents a simplified task. In this example, all players were accountable to a high level of effort, yet accountability for quality of response varied. I believe intratask variation may contribute to the high congruence between the stated task

and the actual task that athletes perform in sport settings and why modification to instructional tasks occurs infrequently in the sport context.

In summary, difference in the instructional task system between sport and physical education are evident in task explicitness, level of task engagement, and task boundaries. A reason for these differences may relate to the unique goals of physical education and sport. In sport, instructional task goals include skill development that can be used successfully in competition (Griffin et al., 1998; Hastie & Saunders, 1992). In physical education instructional task goals are often unclear and/or relate to participation and effort (Ward, Doutis et al., 1999). Why coaches use explicit instructional tasks and physical educators use implicit or partially explicit tasks may be an important question to examine to understand how the contextual differences of sport and physical education influence the PoA.

Student Social Task System

Student social tasks add to the complexity of the teaching-learning environment as students and teachers often have competing interests in the classroom. Until recently, research on the student social task system had not received the attention of the instructional and managerial task systems. Jones (1992) identified the student social task system in physical education and research has since been conducted to examine this task system in a variety of physical education and sport settings. Specifically, student social tasks are tasks that relate to the intentions students seek for social interaction within a class (Siedentop, 1988).

In the context of most classrooms, student social tasks are the only domain controlled by the students (Carlson & Hastie, 1997). Student social tasks are not

explicitly stated, but rather develop subtly and are communicated surreptitiously among students (Siedentop & Tannehill, 2000). Within the student social task system two main agendas have been identified. The student social agendas include, first, to socialize and have fun, and second to achieve a passing grade while performing the minimal amount of work (Allen, 1986).

Research indicates students employ six strategies to achieve their two major goals; this includes figuring out their teachers, giving the teacher what they want, having fun, minimizing work, reducing boredom, and staying out of trouble (Allen, 1986). These social agendas can put considerable pressure on the teacher's agenda for the class if left unchecked and unregulated (Carlson & Hastie, 1997; Hastie & Pickwell, 1996). From a student perspective, the best type of class is one that allows them to socialize while learning something interesting as they pass the course (Allen, 1986). Siedentop (1988) suggested that the best way to deal with the student social agenda is to find ways to allow the student social system to enhance and motivate the instructional task system.

The student social task system's influence on the instructional task system appears to be context specific. In many traditional physical education contexts, student social tasks work against the wishes of the teacher in relation to the goals of the instructional and management task systems (Allen, 1986; Hastie & Pickwell, 1996; Siedentop et al., 1994). If social tasks develop unimpeded, socializing may become the task of the class as students fail to participate in the academic work or follow the rules and routines of the classroom (Hastie & Pickwell, 1996). In situations where the teacher is content to trade instructional robustness for non-disruptive behavior then students are

able to achieve social objectives relatively unimpeded as passing the class is no longer problematic (Hastie & Pickwell, 1996; Supaporn et al., 2003).

Various instructional models have foregrounded the student social task system to support the instructional and managerial task systems. In an eight-grade lacrosse unit, part of the Saber-Tooth project (i.e., a physical education reform effort), the student social task system was used in part, in support of the instructional task system by explicitly teaching social skills, assessing social skills, and using cooperation among students (Ward, Doutis et al., 1999). In this situation, student social interactions were fostered as part of the instructional system and students were held accountable for their social interactions.

Researchers have shown that expressions of student social tasks are vital to learning in sport education units (Carlson & Hastie, 1997; Hastie, 2000). In sport education, the student social task system is foregrounded as a key part of the instruction. The student's social agenda is no different during a sport education season than in a traditional physical education class, but in sport education one way of having fun is through playing good games and performing well in instructional tasks (e.g., experiencing good competition) (Hastie, 2000). In this case the student's social agenda is consistent with the teacher's goals for instruction during the sport education season.

Research on sport education confirms that student leadership roles and responsible behavior are used as vehicles to content development and reflect a reconstructed social pattern within the social task system (Carlson & Hastie, 1997; Hastie, 2000). For example, in a study of three classes involved in units of netball and touch football, students were responsible for both leadership and managerial roles that

characterize the sport education model. Student leadership skills were fostered as students worked as coaches, referees, and disciplinarians (Carlson & Hastie, 1997). Students responded well to their peers as "coaches" yet they were motivated to improve their skills not to earn a passing grade but rather to be able to perform effectively for their team. Also, students had shared responsibility for all task systems through their roles as coach, captain or referee and did not engage in social tasks such as talking with friends out of boredom or reaction to a strict teacher (Carlson & Hastie, 1997; Hastie, 2000).

Another example of the student social task system that enhanced and motivated the instructional task system was in an Australian outdoor adventure camp setting. In this one-week camp experience, the student social task system actually supported the instructional task system as well as encouraged full participation. Students indicated that the social nature of the camp setting was a positive aspect of camp, and the ethic of 'challenge by choice' facilitated the strong commitment to task accomplishment, which resulted in the student social task system contributing to the instructional and managerial systems (Hastie, 1995).

Student social tasks in the sport context have also been explored. In a study that examined the ecology of a high school volleyball team over 44 practices, researchers found the overall social system to be unobtrusive and low profile. Player-to-player interactions were minimal during main portions of practice and reflected their compliance with the "quiet rule" or intense concentration on tasks (Griffin et al., 1998). In both an elite sport and high school sport setting, players would support each other with encouragement about performance and supportive banter during practice (Griffin et al., 1998; Hastie & Saunders, 1992). Unlike the physical education context, these athletes

had a submissive response to their coach, were highly compliant, and responded with high task congruence. These athletes responded to the coach's demands as he controlled access to match play and therefore controlled practice (Griffin et al., 1998).

Although sport settings and classroom settings differ, how coaches and athletes negotiate social tasks in a collaborative sport environment may have implications for the physical education setting. Further research needs to be conducted in various sport contexts that feature successful coaches who foster collaboration and encourage social participation. Such research in sport could serve to support a model for teacher/coach education programs and help to facilitate more positive educational experiences for all students and athletes. The student social task system in physical education and sport is an area that needs further exploration to understand them in relationship to the ecologies in each setting.

Conclusion

As a result of my exploration of the literature I have drawn several conclusions that will guide my future research. These conclusions include (a) some teacher/coaches and their students operate different PoAs in sport and physical education, (b) the PoA appears to be more robust when instruction, management, accountability, and social tasks support each other, and (c) accountability appears to play a prominent role in the PoA in both sport and physical education.

First, from the limited research available it appears that teacher/coaches operate different PoAs in sport and physical education. Quality instruction (e.g. less time waiting, higher success levels, more OTRs) and a robust PoA were documented in a study conducted in the sport context, yet the literature provides little evidence of robust PoAs in

secondary physical education. Robust PoAs in sport suggest some teacher/coaches do their best teaching in sport practice after the final school bell rings. This suggests, however, that some teacher/coaches do have the skills to operate within a robust PoA in the sport context. The next step is to identify how teacher/coaches can change practice or better understand context to operate a robust PoA in physical education and sport.

Second, important contextual differences exist between the goals of sport and physical education. In sport, coaches, players, and even fans can articulate success (i.e., goals), typically expressed as winning. Coaches and players understand sport values associated with the varsity model (Coakley, 1998). Coaches and athletes know what they are required to do and work to achieve common goals and instruction is often tailored in response to game play results. Thus, pedagogical practices are aligned with assessments (i.e., game play results). In physical education, however, teachers, students, parents and school administrators often do not share the same program goals. When teacher/coaches, and students or athletes clearly understand and value program outcomes, improved learning opportunities may be possible in both contexts.

Third, accountability seems to play a unique and essential role in the PoA in sport and physical education. Formal accountability (e.g., win-loss records, public reporting of player statistics or selection as a starter) and content embedded accountability (e.g., affiliation with a team) play prominent roles in the few sport contexts that have been examined. Coaches also use a variety of informal accountability measures such as challenges in rapid fire drills to hold students accountable for quality performance (Griffin et al., 1998). This system of accountability provides the coach and athletes with ongoing information on individual and team progress. Coaches make ongoing

pedagogical adjustments to engage athletes in appropriate instructional tasks; therefore student negotiation and modification of tasks are rare. Accountability in physical education frequently lacks the content embedded and formal accountability found in sport. Instructional outcomes in physical education are rarely assessed and seldom used as a factor to determine students' grades (Matanin & Tannehill, 1994). It is typical for students in secondary physical education to be held accountable for dress, participation, and effort (Imwold et al., 1982; Matanin & Tannehill, 1994; Tousignant & Siedentop, 1983).

Research revealed that differences exist in the context of teaching physical education and coaching sport. The next step is to understand how teacher/coaches can create robust learning ecologies in each context. If physical education teacher/coaches are able to participate in a robust PoA in one context, with the proper awareness and education they may be successful in both contexts.

CHAPTER 3

METHOD

Introduction

The purpose of this qualitative case study was to examine an exemplary secondary physical education teacher/coach in the context of teaching a physical education soccer unit and coaching the varsity boys' soccer team. This included an examination of the PoAs, tasks, task systems, and the influence of dual role responsibilities in each context. To conduct this investigation I used videotaped observations, written field notes, formal interviews, informal interviews, and document analysis to provide a description of a dual role professional teaching physical education and coaching sport.

Data were collected to provide "rich, thick description" of both student/athlete and teacher/coach behaviors in each context. Through this description that included participants' words, description of class and practice tasks, and excerpts of documents, the reader is able to view the life-world of an exemplary secondary physical education teacher/coach.

The purpose of this chapter is to provide information about how I collected data and why specific research methods were used. Further, I will explain data analysis in relationship to the development of categories that described the PoAs in sport and physical education.

Case Study Design

The work of a physical education teacher/coach teaching a unit of soccer and coaching the varsity soccer team can be classified as a case. A *case* is defined as a

specific complex functioning thing, a bounded integrated system (Stake, 1995). To be considered a case, there must be a finite amount of time for data gathering (e.g., number of people that could be interviewed, time for observations) (Miles & Huberman, 1994). Further, a case is something special to be studied (e.g., person, program, or event), it is an entity, and is something we do not sufficiently understand but want to (Stake, 1995).

In the spring of 2001 I conducted a pilot study that included a physical education teacher/coach, and his physical education class and varsity softball team. Findings from the pilot study indicated that differences existed in the ecologies of sport and physical education in relationship to type of task, number of instructional tasks, target student OTR's, and class or practice rules and routines. A far more robust ecology was evident in the sport context than in the physical education context, which could be described as casual. Unclear, however, were why these differences occurred and how context influenced these differences. In the present study, data from observations were used as a springboard for discussions with the teacher/coach and students with regards to why or why not differences occurred in the ecology of sport and physical education.

Case study design, therefore, was selected because it had a distinct advantage when it came to answering "how" and "why" questions (Stake, 1995). Understanding how and why an exemplary dual role professional teaches and coaches was an important focus of this study. "Case studies help us to understand processes of events, projects, and programs and to discover context characteristics that will shed light on an issue or object" (Sanders, 1981, p.44).

The research I conducted with this teacher/coach can be classified as an instrumental case study. The definition of an *instrumental case* is that the particular case

is used to understand something else (e.g., PoA's in physical education and sport). The case study was instrumental to accomplishing something other than just understanding this particular teacher/coach (i.e., an intrinsic case) (Stake, 1995). By concentrating on a single teacher/coach, I was able to collect data during the entire physical education unit and at the majority of practices, which would not have been possible if a multiple case study approach was adopted. Therefore, through the examination of one exemplary teacher/coach I was able to uncover the interaction of significant factors characteristic of this dual role professional (Merriam, 1998).

One of the most important criteria in selecting a case should be to maximize what we can learn. The work of an exemplary dual role professional teaching secondary physical education and coaching interscholastic sport was a case that is rich for inquiry. Patton (1990) argues "logic and power of purposeful sampling lies in selecting information rich cases for study in depth. Information rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the research" (p. 169).

Furthermore, the selection of a qualitative case study was essential to inform my research questions as the case design can be characterized as being particularistic, descriptive, and heuristic (Merriam, 1998). First, the case is particularistic because it focuses on a particular situation, event, program or phenomenon. Case studies "concentrate attention on the way particular groups of people confront specific problems, taking a holistic view of the situation..." (Shaw, 1978, p.2). Second, the case is descriptive in that the end product of the case study is a rich, "thick" description of the phenomenon under study. Third, the case illuminates the reader's understanding of the

phenomenon under study and therefore is heuristic. Insights into how things get to be the way they are can be expected to result from case studies (Stake, 1981, p. 47).

In summary, the case study design was selected because of the nature of the research problem and the questions being asked. The case study design offered a significant way to examine the work of a physical education teacher/coach in a real-life situation. The merits of case study design outweighed the limitations, which included issues of generalizability, reliability, and validity, and which will be addressed in the trustworthiness section.

School Site Selection

School site selection was an important step in the research process. The high school selected employed a certified physical education teacher/coach. The school had an interscholastic varsity sport team of the same activity (e.g., soccer) that was taught in physical education by the same teacher/coach. The school allowed participants, both student/athletes and the teacher/coach to fully participate (e.g., videotape lessons/practice, interviews, provide documents) in the study.

To find possible participants I spoke with three athletic directors who were knowledgeable about several Maine athletic conferences. First, I asked the athletic directors to identify any secondary physical education teacher/coaches who coached a fall sport. Second, I asked each athletic director to recommend several teacher/coaches they would consider exemplary. Some of the possible participants were eliminated because they did not fit the criteria for this study due to grade level, experience or subject. Third, I sent two physical education teacher/coaches (Tom and Joel) informational letters about my research study to let them know that I would contact them about participation in the

study. Two athletic directors recommended Tom Samuelson (pseudonym), an experienced soccer coach and physical education teacher, as an exemplary teacher/coach due to his success coaching boys' soccer. Finally, I set up time to observe (i.e., teaching physical education) and talk with the two possible participants. I observed Joel for ½ a day and Tom for 3 days. From my observations of Tom teaching physical education, and discussions with students, other teachers and his principal, I determined that Tom would be an appropriate participant. In relationship to his teaching in physical education clear routines were established for management, students were actively engaged in instructional tasks (e.g., free weight workout), and Tom provided students with ongoing feedback on their performance. I did not select Joel to participate in this study because I learned during my observation that he would not be teaching soccer as a unit of instruction in physical education in the fall of 2002 as he teaches units on a rotating basis: therefore, he would not fit the criteria for this study.

Site Description

Valley High School (pseudonym) was housed in a well-maintained building surrounded by athletic fields. The school had a typical small school feel. School spirit was evident in the gymnasium as walls were decorated with championship banners, the school mascot, and posters that announced sporting events. In the hallways, trophies from academic and dramatic contests lined the display cabinets which were evidence of the students' academic and artistic talents.

Valley High School a small (n= 337 pupils) regional school, served four towns which were located in a working class coastal community in the Northeast. One of the most defining characteristic of the community was the cultural, social and economic

influence of the fishing industry. The fishing industry was inclusive of a broad range of employment opportunities such as lobstering, clamming, shrimping, urchin diving, catching bait, and boat building. Many families made their living on the ocean although schools, a correctional facility, and "Mom and Pop" businesses were also significant employers. High school students often worked as sternman on lobster boats, or followed the tides and dug clams, profitable, yet backbreaking work. Although it was easy to glamorize life on the water the reality of life in this coastal community was shaped by poverty associated with seasonal work. Lack of healthcare benefits, drug use (purported to be used in an effort to tolerate difficult conditions on the water), and an insidious lack of upward mobility were challenges which shaped the school and community.

At the high school, only 46% of students continued with post-secondary education as compared to the state average of 66%. For some students, the opportunity to be independent and make money on the water (e.g., sternman) was more attractive than finishing high school or higher education. The community made a significant financial commitment to education, however with a cost per pupil of $7,910.29 which was above the state average of $7, 018.71. Despite the financial support to education the high school graduation rate (85%) was below the state average (87%) (mainedoe.org, 2004).

Entry to the Site

I contacted athletic directors in the spring of 2002 to solicit information about potential participants. After observing, I determined that Tom was an appropriate physical education teacher/coach for this study. Once the participant's permission was obtained, I initiated formal entry procedures required for that site. This included a meeting with the assistant principal/athletic director to explain the purpose, data

collection methods and researcher/participant roles as well as providing the school with a copy of informed consent forms.

At the onset of the soccer season and at the first physical education class of the year I explained the intent and procedures of the study to both the boys' soccer team and the physical education class. In addition, I reviewed the informed consent forms (Appendix A) with all participants. I explained the purpose, risk, and rights that participants in a research study hold. Tom Samuelson, students in the intact physical education class and members of the boys' varsity soccer team all signed the informed consent document. Participants were assured that I made maintaining their anonymity a priority by using pseudonyms for people and place when writing descriptions of the present study for publication, presentation, or discussion with colleagues.

Participants

Informed consent and human subject approval (see Appendix A) was obtained from all participants. Participants included Tom Samuelson (pseudonym) and his physical education class (N=14), and his varsity boy's soccer team (N=23). Tom was employed as a high school physical education teacher and varsity soccer coach for 34 years at a small (N=337) coastal Northeastern high school. Students, former students, and colleagues described Tom as an exemplary teacher/coach.

Tom Samuelson's soccer coaching record, one of the best in the state, was 360-127-40. The team finished the regular season undefeated (16-0) and were league champions in 2002 when data were collected. The team participated in the state championship play-offs and was defeated in the semi-final round. Soccer, a popular sport

at the school, had a tradition of success which included numerous league championship titles and 7 state team championship titles.

In previous years, Tom had been nominated for state physical education teacher of the year. His innovative fitness activities with a focus on strength training were hallmarks of the physical education program, which included team, individual, fitness, and challenge activities. Tom was the only physical education teacher employed at the high school. Physical education classes met every other day for 40 minutes and included students in grades 9-12.

Data Collection

Data were collected throughout the entire fall soccer season (11 weeks) at 31 soccer practices and games; in physical education at 15 class sessions; and for extended portions of the school day in the first quarter of the year. Data were collected from six sources: (a) descriptive field notes from class and practice observations, (b) video and audio recording of class and practice sessions, (c) formal interviews with the teacher/coach, (d) formal interviews with students and athletes, (e) informal interviews with all participants, and (f) class and practice artifacts,.

Descriptive Field Notes

Descriptive written field notes from observations provided a detailed record of observed classroom/practice events, teacher behaviors, student behaviors, and activities that occurred throughout the class or practice session. Descriptive field notes included aspects of the PoA (instructional, managerial, student social, and accountability tasks), but were flexible enough to allow the researcher to record observations of the teacher/coach and class/practice structures as they naturally unfolded. In class and

practice sessions, specific attention was given to what learning tasks were presented, and how students interacted within the class (i.e., to uncover the complexity of the student-social task system). Student and teacher dialogue before and after a class or practice session was also recorded. Field notes were word-processed after each observation and additional observer comments were often included. Also, additional field notes were recorded from videotaped observations of a practice or class session. I differentiated live observations from observer comments by italicizing observer comments and reflective notes. I managed this data with the Ethnograph version 5.0

Videotaped Observations

One soccer physical education unit (7 class sessions) and 31 boys' varsity soccer practice sessions/games were videotaped to obtain a permanent record of the PoA in the physical education and sport context. Each practice session and lesson of the unit was recorded on an individual videotape. This videotaped record was used in analysis of the PoA that existed in the physical education unit and sport season, specifically to code for the Games Stages (Rink, 1998) analysis, level of task explicitness, and NASPE (National Association of Physical Education and Sport) appropriate practices.

Interviews

Formal and informal interviews were conduced with the participants. Each type of interview allowed the researcher to obtain data from the teacher/coach and students and athletes about the PoAs in physical education and interscholastic sport.

Formal interviews. Tom participated in three formal interviews throughout the research process. The focus of the interviews was as follows: (a) personal/professional background and description of current responsibilities as a teacher/coach, and (b)

reflections of the success of the physical education unit and sport season. A semi-structured interview guide was used to conduct interviews (see Appendix B). A semi-structured approach allowed the freedom to explore issues that the participant mentioned during the interview that did not appear in the interview guide. The flexibility of the semi-structured interview (i.e., asking further probe questions) was important in discovering how the participant viewed his role as a teacher/coach and the PoAs in physical education and sport.

Formal interviews were 60-90 minutes in length. The first was conducted in the first week of the school year; the second after the compietion of the physical education unit; and the third after all observations were completed. Interviews were audio taped and transcribed verbatim. I piloted interview questions with a physical education teacher/coach who was not part of the present study. I made changes to the interview questions that included elimination of several questions that were redundant and made most questions open-ended.

Formal 30-40 minute semi-structured interviews with students and athletes were conducted. This included 7 (50%) students from physical education and 21 (91%) athletes from the soccer team. At the onset of the study 6 students from physical education and 6 athletes from the soccer team were selected for interviews to represent a variety of perspectives (e.g., male, female, higher skilled and lower skilled). Due to my prolonged engagement in the sport setting all of the athletes asked to be interviewed which accounts for the differences in number of student/athlete interviews. Each student/athlete participated in a formal interview after the unit of instruction or end of sport season. The focus of the interview was (a) participant's background experiences in

sport, physical education, and expectations of learning, and (b) reflection on unit or season in relationship to goals and expectations. Interviews were audio taped and transcribed verbatim. The focus of the student/athlete interview was on the participant's background in sport and physical education, expectations for learning, and reflection on the season or unit.

Informal interviews. Informal interviews served to develop rapport between the researcher and participants. Informal interviews were conducted with students, athletes, Tom, and Tom's colleagues when an opportunity was available. Before and after class or practice sessions I asked students/athletes questions. The focus varied throughout the research process and included how participants' made meaning of events in the class or practice session, and clarification of observations. Informal interviews with colleagues focused on their perceptions of Tom's role in the school as a teacher/coach. Responses were recorded in field notes after the interaction.

Document data

Artifacts that included plans, curriculum guides, training rules, assessments, game statistics, state frameworks, media releases, and all materials distributed to class/team during the study were collected.

Analysis of Data

Data collection and data analysis are a simultaneous process in a qualitative study; therefore, data analysis informed the data collection process. Next will be a description of the process of data analysis followed in the study.

The analysis which was conducted from an ecological perspective allowed for the contextualization of events in physical education and sport (Supaporn et al., 2003). Data

collection and the data analysis were on-going throughout the research process (Merriam, 1998). Interview transcripts (e.g., student/athlete and teacher/coach) and field notes from live and videotaped observations and documents were inductively coded using constant comparative methods (Strausss & Corbin, 1998). Initial data coding involved descriptive codes and interpretive codes (Miles & Huberman, 1994). Descriptive codes entailed little interpretation (e.g., attribute a class of phenomena to a segment of text). Descriptive codes included instructional, managerial, student social, and accountability tasks as informed by the literature. Interpretive codes were used to make more abstract inferences about the meaning of data (e.g., attribute a class of phenomena to an abstract concept).

The purpose of the coding was to search for similarities and differences in the PoA's, and dual role responsibilities, and to develop categories with mutually exclusive definitions, properties, and dimensions. A further analysis of observational field notes based on Rink's Games Stages (1998) was conducted to categorize results into the four games stages. The games stage analysis provided a lens for a parallel examination of content development in sport and physical education. Level of instructional task explicitness (e.g., explicit, partially explicit, implicit, routine) was coded from videotaped observations. Analysis of task explicitness was conducted because level of explicitness has been associated with order in the learning environment (Doyle, 1986b). Field notes from observations were then analyzed for NASPE's (1998) appropriate practices which provided an additional lens to explore the PoA. Once categories were developed from inductive, games stage, task explicitness, and appropriate practice analysis, more general themes were identified that were inclusive of several categories. Themes and categories were interpreted in relationship to the PoA.

To make public the process of category development a decision log was maintained. This was an explicit record of the "decision rules" I followed in selecting data chunks for entry. This log was maintained throughout the data analysis process (Miles & Huberman, 1994).

Trustworthiness

In an attempt to insure credibility and to limit my researcher bias, four methods were used to address trustworthiness as recommended by Lincoln and Guba (1990): (a) prolonged engagement, (b) triangulation, (c) member checks, and (d) a researcher journal.

Prolonged engagement. Observations in the sport setting throughout an entire sport season provided me as the researcher the opportunity to understand the sport culture as well as to develop the trust of participants due to the prolonged engagement in the setting (Lincoln & Guba, 1990). In physical education, pre-observation was conducted as I started observations on the first day of class as soccer was not the first unit of the year. Observations throughout the unit of instruction and contact made with participants in the sport setting facilitated the rapport between the researcher and participants over an extended period of time.

Triangulation. In an effort to understand the PoA in sport and physical education, and the complexity of the dual role multiple data sources and multiple perspectives (e.g., teacher and student) served as the methods for triangulation of data. Triangulation improves the credibility of findings and interpretations (Pitman & Maxwell, 1992). Each data source was used to cross check individual accounts and validate information. For example, observations served to validate data gathered from interviews.

Member checks. Member checking involves sharing interpretations of findings with participants (Lincoln & Guba, 1990). Member checking is a way to contribute to the credibility of a report. I provided all participants access to interview transcripts and initial findings and results of the study. In addition, I offered to share any material (i.e., data) with the participants that they are concerned about (Seidman, 1998), although no request were made to see data.

Researcher journal. I kept a reflective journal (i.e., diary) throughout the study. The journal consisted of research memos that focused on personal reflections on the research process, methodological decisions made, questions raised, insights regarding researcher bias, and my evolving perceptions of the study. The researcher journal also served as a way to check my researcher bias and as a method for me to write about how I make sense of the data during data collection and data analysis.

Researcher Bias

In qualitative research the researcher is considered the primary instrument of data analysis; therefore, I feel it is important for the reader to be aware of some of my personal biography. First, I was a secondary physical education teacher/coach for ten years before I entered graduate school in 1998. I coached three varsity sports (i.e., girls' soccer, girls' gymnastics, and boys' and girls' track and field) and had a summer gymnastics camp during the time that I was employed as a physical education teacher/coach. I found my work as a teacher/coach to be satisfying on both a personal and professional level. I entered graduate school as a means to update my knowledge of teaching and coaching. Once in graduate school I was attracted to the notion of teaching college level students and participating in research.

Second, I have extensive knowledge of soccer coaching, as I was a high school varsity soccer coach for ten years. I gained knowledge about coaching from experience (i.e., trial and error), through regular attendance at conferences, and extensive reading. I purposely selected a soccer coach for this study because soccer is a sport that I know well and I felt that my experience allowed to have a deeper understanding of the teaching and coaching setting.

Finally, I believe that physical education teacher/coaches can be effective in both teaching and coaching. I do not believe that teaching responsibilities should be neglected during the sport season or that being a successful teacher and coach is mutually exclusive. Although I bring to this research project deeply rooted beliefs about teacher/coaches and the ability to meet the challenges of this dual role, I am also aware of teacher/coaches who cannot cope with the complexity of the dual role.

My experience as a teacher/coach and my beliefs about teacher/coaches has shaped my interests as a researcher. I undertook this study to help me, and possibly other educators, understand how an exemplary teacher/coach manages the dual role responsibilities. In an effort to acknowledge my biases I used research memos and discussions with my advisor and a peer debriefer (Mary Henninger) to help me recognize when my biases were interfering or limiting my examination or understanding of data.

CHAPTER 4

RESULTS

Today, schools remain under close public scrutiny, and federal policymakers continue to shape schools with policies such as the No Child Left Behind Act of 2001(NCLB). The NCLB is a major expansion of the federal role in education which has a dramatic influence on students, teachers, and administrators. The Act requires annual testing of state mandated learning standards and establishes a sequence of specific consequences in the case of failure (Wenning, Herdman, & Smith, 2002). Public schools will soon be in the business of student recruitment as students in underperforming schools will be allowed to choose another school.

In the context of an expanded federal role in education, the work of teacher/coaches as dual role professionals has added significance. From a resource perspective (Callero, 1994), roles are available in a generalized manner to the community, the dual role, occupied by teacher/coaches, can be used by schools to respond (e.g., recruit students) to the NCLB reform (Callero, 1994). When role is viewed from a resource perspective (i.e., roles are tools used to control resources and establish social structure) teacher/coaches occupy powerful dual roles that can be used to connect students to their school (Callero, 1994). For example, teacher/coaches have avenues (e.g., curricular and extra curricular) to develop positive relationships with students that can provide a bridge between state mandated standards and learning. Further the high visibility and cultural relevance of interscholastic sport places teacher/coaches in distinct positions in schools to connect with the community as ambassadors for the school's educational mission (Gerdy, 2000).

Teacher/coaches have long been revered for their positive influence on youth. Success on the playing field is significant as sport in the U.S. is connected to major spheres of social life that includes the family, economy, media, politics, education, and religion (Coakely, 1998). Sport has become an integral part of school life for many students in the U.S. Membership on interscholastic sport teams has been associated with higher grade point averages for athletes, positive attitudes toward school, and as a source of status that contributes to a positive educational experience (Miracle & Rees, 1994). Most high schools have exclusive varsity sport teams, and some of these teams attract more attention among students and community residents than academic programs do (Coakley, 1998). Sport leaders, often teacher/coaches, are thus in positions to influence the educational experiences of students depending on how they use their dual role position as teacher/coach.

In the U.S., teachers coach one-third to one-half of all high school sports teams, which means up to 200,000 of our nation's teachers are dual role professionals employed as teacher/coaches (Clark, 2000). Interscholastic sport is often coached by physical education teachers who are required or choose to coach sport as an extra curricular activity in addition to their teaching responsibilities (Sage, 1989a, 1989b; Spencer, 1999). Researchers found that most (77%) pre-service physical education majors enter the field with a desire to coach (Lawson, 1983; Templin, 1980; Sage, 1987) and through pre-service training develop pedagogical skills and sport knowledge that can be used in teaching physical education and coaching sport (Placek, et al., 1995). The relationship, however, between coaching and teaching is often tenuous as success as a physical

education teacher/coach is often defined solely by success in the sport setting (Sage, 1989a), and job security is tied to success in the coaching role (Chu, 1978; Figone, 1994).

Role Theory Perspective

Over the last 30 years, role theory has been used to examine the multiple role demands physical education teacher/coaches encounter (Bain, 1978; Bain & Wendt, 1983a; Chu, 1981, 1984; Locke & Massengale, 1978; Sage, 1989a; Yalcin, 2000). For much of this research a definition of role from a structural perspective has been used. From this perspective, "roles are viewed as behavioral expectations that are associated with, and emerge from, identifiable positions in social structure" (Callero, 1994, p. 229). When role is viewed from a structural perspective the efficacy of human action tends to be lost (Sewall, 1992). Since the structural perspective of role limits the emphasis of individual agency (i.e., human action), one result is that the dual role of teacher/coach is more likely to be viewed as problematic. From a structural perspective of role, findings indicate that teacher/coaches often experience a variety of role conflicts (Chu, 1981; Bain, 1983; Earls, 1981; Locke & Massengale, 1978; Templin, 1980).

A limitation of a traditional perspective of role is that the work of exemplary physical education teacher/coaches, those who create robust learning environments in both physical education and sport, remain ambiguous. Cultural stereotypes of the physical education teacher/coach as a dynamic coach and as a "roll out the ball" teacher may be perpetuated when the work of teacher/coaches is viewed only as a source of conflict and problematized. Some teacher/coaches find satisfaction with the simultaneous demands of teaching and coaching rather than role conflict (Spencer, 1999; Templin, Sparkes, Grant, & Schempp, 1994).

The theoretical framework for the present study was based on an adaptation of Callero's (1994) resource perspective of role to examine the work of an exemplary physical education teacher/coach. From a resource perspective of role, roles are viewed as resources (i.e., source of power) that enable individuals to accomplish certain ends and without role; certain types of action are not possible (Callero, 1994). Baker and Faulkner (1991) theorize that roles actually allow actors (e.g., physical education teacher/coaches) to create new positions and establish social structure. Roles are tools used in a competitive struggle to control resources and to establish social structures and through their use, roles aid in the construction of social action (Callero, 1994).

From a resource perspective recognition of the interdependence between role, schemas, resources, and social structure can serve as a foundation to understand the work of an exemplary physical education teacher/coach (Callero, 1994). Roles are defined as cultural objects and as cultural objects, roles are assumed to be real, objective, meaningful features of the social world. For example, the role of coach is real insofar as the community succeeds in using this cultural object to organize, understand, and make sense of particular actions and plans (e.g., requirement that athletes wear game uniform) (Callero, 1994). Role is a cultural object that is simultaneously a schema and a resource, and therefore maintained as an element of social structure (Callero, 1994). Sets of mutually sustained schemas (i.e., cultural assumptions, taken for granted rules) and resources (i.e., objects that serve as a source of power such as fear, respect, and reverence) constitute structure (Sewall, 1992). Structure is carried in reproduced practices and relationships that have become stable (Sewall, 1992).

The role of teacher/coach is a particular schema-resource set that is maintained as an element of the social structure of a school and community. As a resource, the teacher/coach role may be used in a number of ways (e.g., to affect students' academic and employment future) as teacher/coaches make attempts to accomplish a variety of tasks. The role of physical education teacher/coach is a cultural object with high cultural endorsement; therefore it can be used as a tool to secure access to social, cultural, and material capital. The cultural relevance of sport contributes to the ability of a teacher/coach to use role as a resource, as culturally valued roles tend to be more powerful as a consequence of role use (Callero, 1994).

From a resource perspective, other individuals and institutions, in addition to the actor (e.g., teacher/coach) have access to the role as a cultural object and can use it for their own purposes. For example, school administrators can use aspects of the role of teacher/coach (e.g., betterment of society by keeping kids off the streets through sport) to enhance the reputation of the school. On an individual level the access to resources which are sources of power (e.g., reverence, respect) from both the teaching role and the coaching role afford teacher/coaches additional tools to influence action and to create structure.

The resource perspective of role provides a broader framework of role to examine the work of teacher/coaches as dual role professional than has previously been conducted. The constructs of this perspective allow for an examination of the type of resources available to teacher/coaches and the uses of resources. The purpose of this study was to examine how an exemplary physical education teacher/coach functioned in the dual role of physical education teacher and varsity soccer coach. Two questions structured this

examination. First, how does this teacher/coach experience the dual role of teacher and coach? Second, how do the dual role responsibilities influence performance in each role?

Methods

A case study approach was adopted to examine the work of an exemplary secondary physical education teacher/coach. Stake (1995) defines a case as a "specific, complex, functioning thing" (pg. 2). A case has a boundary and working parts, thus people and programs are potential cases. Case study design was selected because it has a distinct advantage when it comes to answering "how" and "why" questions (Stake, 1995). Understanding how and why an exemplary dual role professional teaches and coaches is an important focus of this study. "Case studies help us to understand processes of events, projects, and programs and to discover context characteristics that will shed light on an issue or object"(Sanders, 1981, p.44).

One of the most important criteria in selecting a case is to maximize what can be learned (Stake, 1995). Therefore, the purposeful selection of the participant to represent exemplary performance in the dual role of teacher/coach was essential. Patton (1990) argues "logic and power of purposeful sampling lies in selecting information rich cases for study in depth. Information rich cases are those from which one learns a great deal about issues of central importance to the purpose of the research" (p. 169). The work of the participant selected (Tom Samuelson) coaching varsity soccer and teaching physical education was a case rich for inquiry.

Role of the Researcher

In qualitative case study research the researcher is the primary instrument of data collection and analysis (Merriam, 1998). Therefore, the biases and experiences of the

researcher are relevant for the reader. As the researcher, I had experience as a physical education teacher/coach and was familiar with the community in which the research was conducted. First, I had 10 years experience as a high school physical education teacher and varsity soccer, gymnastics, and track & field coach. During my tenure as a teacher/coach I found satisfaction as a dual role professional. Second, I understood some aspects of the school and community prior the study. For 20 years before the study I lived in a neighboring community. Finally, I believe, success as a physical education teacher and success as an athletic coach are not mutually exclusive. I was acutely aware that my experiences as a dual role professional led to my interest in the examination of the work of an exemplary teacher/coach. To explore my biases, I maintained a reflective journal to document my feelings, experiences, and perceptions throughout the research process. Through this reflective process I was able to acknowledge my biases and continue to seek to understand my participant's unique experiences.

Participants and Settings

Informed consent and human subject approval was obtained from all participants. Participants included Tom Samuelson (pseudonym) and his physical education class (N=14), and his varsity boy's soccer team (N=23). Tom was employed as a high school physical education teacher and varsity soccer coach for 34 years at a small (N=337) coastal Northeastern high school. Students, former students, and colleagues described Tom as an exemplary teacher/coach.

Tom Samuelson's soccer coaching record, one of the best in the state, was 360-127-40. The team finished the regular season undefeated (16-0) and were league champions in 2002 when data were collected. The team participated in the state

championship play-offs and was defeated in the semi-final round. Soccer, a popular sport at the school, had a tradition of success which included numerous league championship titles and 7 state team championship titles.

In previous years, Tom had been nominated for state physical education teacher of the year. His innovative fitness activities with a focus on strength training were hallmarks of the physical education program, which included team, individual, fitness, and challenge activities. Tom was the only physical education teacher employed at the high school. Physical education classes met every other day for 40 minutes and included students in grades 9-12.

Data Collection

Data were collected for this study as part of a larger study designed to compare the work of a physical education teacher/coach teaching and coaching. Data were collected throughout the entire fall soccer season (11 weeks) at 31 soccer practices and games; in physical education at 15 class sessions; and for extended portions of the school day in the first quarter of the year. Data were gathered from four sources: (a) descriptive field notes from class, practice, and school observations, (b) formal interviews with the teacher/coach, (c) formal interviews with students and athletes, and (d) informal interviews with all participants and Tom's colleagues.

Descriptive field notes included a record of instructional, managerial, accountability and social tasks; responses to tasks by student/athletes; and descriptions of teacher/coach behaviors. Student and teacher dialogue before and after a class or practice session was also recorded. Field notes were word-processed after each observation and additional observer comments were often included.

The teacher/coach participated in three formal 90-minute interviews throughout the research process. The focus of the interviews was as follows: (a) participant's personal/professional background, (b) description of responsibilities and role as a teacher/coach, and (3) reflections on the physical education units, sport season, and work as a teacher/coach.

Formal 30-40 minute semi-structured interviews with students and athletes were conducted. This included 7 students from physical education and 21 athletes from the soccer team. At the onset of the study 7 students from physical education and 7 athletes from the soccer team were selected for interviews to represent a variety of perspectives (male, female, higher skilled, lower skilled, starter, non-starter). Due to my prolonged engagement in the sport setting 21/23 of the athletes asked to be interviewed which accounts for the differences in number of student/athlete interviews. The focus of the student/athlete interview was on the participant's background in sport and physical education, expectations for learning, and reflection on the season or unit. Informal interviews were conducted with students, athletes, Tom, and Tom's colleagues when an opportunity was available. Before and after class or practice sessions I asked students/athletes questions. The focus varied throughout the research process and included how participants' made meaning of events in the class or practice session, and clarification of observations. Informal interviews with colleagues focused on their perceptions of Tom's role in the school as a teacher/coach. Responses were recorded in field notes after the interaction.

Data Analysis

Data collection and the data analysis process were on-going throughout the research process (Merriam, 1998). Interviews were transcribed verbatim and coded; field notes were word-processed and coded. Data were analyzed using a constant comparison method (Strausss & Corbin, 1998). The Ethnograph 5.0 was used to manage and organize data into initial categories. Initial data were open-coded which involved descriptive codes and interpretive codes. Initial codes included 22 codes. Categories were developed and then organized into 9 general themes and labeled with pattern codes (Miles & Huberman, 1994) (see Figure 3).

Results

Results support three thematic findings. First, there was a similarity and compatibility of teaching physical education and coaching sport based on how Tom claimed the teaching and coaching role. Second, relationship building served as a powerful resource Tom accessed through the teaching and coaching role. Third, Tom had an appreciation and understanding of the community, which allowed him to use his role as teacher/coach to garner community support.

Teaching and Coaching as Similar Roles

Tom used his role as a teacher/coach to define himself as a caring professional. Tom considered the roles of teacher and coach as similar and not easily separated. Throughout his career as a physical education teacher and varsity boy's soccer coach, Tom worked exclusively as a dual role professional. Therefore, he explained, "I don't know anything else." Tom said,

> No, no, no they [teacher and coach] are not such distinct roles…its kids… I don't really see much distinction there except that you have more time with the kids in

> coaching. But you know you care just as much for the kid who is not an athlete as the kid that is. You may be in a position [as a coach] to help that person more, but also on the other hand there are some cases [as a physical education teacher] where you can make differences in the lives of kids who are not athletes. Care for them and work things out.

When asked if he considered himself a teacher first and a coach second Tom responded, "Well, I am more complex than that. You know, I don't even know. Certainly that [physical education] is where I spend most of my time." Tom described teaching and coaching as a "natural fit" and thus he was able to integrate both roles since both required his keen understanding of young people, sport, and physical activity. Tom explained that he believed that most 'good' physical education teachers would be 'naturally' drawn to coaching.

> Physical education people are a unique group of people and a good physical education person is going to find themselves coaching just because that is a gift in life they have been given. Coaching is an additional opportunity to use it.

Further, he acknowledged that the dual role served to make him better in his role as physical education teacher and soccer coach. In this situation Tom used the dual role as a resource to expand his understanding of the teaching-learning process.

> I think the coaching helps you as a physical education person a lot too. Life is a mistake area that is how you learn…Consider that [the sport context] your learning center and if you make mistakes well that is how you are going to learn.

Three categories provide further evidence of the similarities and compatibility of the dual roles. This includes common goals, shared attributes, and time and space constraints. First, Tom had two goals for physical education and sport which included helping students and athletes to maximize their potential, and to help students develop an appreciation for others. Tom explained in a formal interview,

> You are trying to help them discover that they are capable of a lot more than they realize they are capable of accomplishing…help them develop an appreciation for others with more ability and an appreciation for those with perhaps less ability.

Field notes indicated that students/athletes were challenged and were provided with on-going feedback and encouragement from Tom, which supported his two goals. The dual role enabled Tom to provide opportunities for students and athletes that he would not be able to secure if role were not available as a resource. Tom stated,

> I think everybody who is a teacher should have a quality to inspire and provide opportunities for kids. Opportunities for kids to achieve that perhaps, if you hadn't been there, they wouldn't have had that option…You have the similarities [in physical education and sport] of respect and appreciation for other people and the contribution that they make.

The shared goal in physical education and sport to maximize potential, and develop an appreciation for others influenced how Tom structured these environments. In physical education, field notes indicated routines were established for instructional and managerial tasks. For example, students participated in self-paced fitness routines. Tom posted fitness circuits and upon entry students worked at fitness stations without prompts from Tom. In sport, Tom used team and individual challenges such as completing 9 team elevators as a transition activity daily (i.e., juggle a soccer ball from both feet, to knees, to head and back down) to give all athletes the opportunity to develop necessary ball control skills. Efficient rules, routines, and expectations in sport and physical education allowed Tom to achieve his shared goal of maximizing student/athlete potential.

Second, Tom identified integrity as an attribute needed to be successful in teaching and coaching. By integrity, Tom meant a deep commitment to caring about kids. Tom said,

> It doesn't make any difference what it is, teaching coaching …don't do it if you are not a person who has integrity. If you are not someone who really cares about

> those kids, don't do it...I think it has more to do with the integrity of the person who is doing it. Anyone who has those qualities they are going to be successful [as a teacher or coach].

Roles emerge in organizations where they are accepted as authentic and Tom's role as an exemplary teacher/coach was valued in the school due in part to his commitment to students (Callero, 1994). Integrity was evident in Tom's commitment to student/athlete learning in sport and physical education. Field notes in sport indicated athletes were constantly challenged to move proficiently. For example, Tom urged players in an early season practice, "It is the little things done well that make a difference." He required focus and personal responsibility for learning, "Some of you need to get up here and spend time on your own with the ball and master it [fast feet series]." Field notes in physical education indicated that he modified tasks to meet the needs of students in physical education. Tom said to a student who had difficulty with a ball handling drill, "You do it slow. Just work with your one foot."

Despite his integrity (i.e., deep commitment to caring about kids) and commitment to both roles, he felt his work, as a physical educator had different value than his work as a coach.

> So often people only think about teams and success and what not. I certainly want to be remembered perhaps even more as a physical education teacher making a difference in kids, especially in kids who would rather not, in the first place, have taken physical education, but did and are glad that they did. And that is perhaps just a little bit more [important] than the coaching.

Third, Tom's dual role responsibilities were not without constraints. Time and space were limitations in both sport and physical education. A lack of planning and reflection time during the soccer season was a source of discontent for Tom, "It is frustrating to the physical education part of it. I would like to be able to give more

thought time and preparation to that." As a reflective teacher and coach, time constraints during the soccer season reduced Tom's opportunities to reflect on his practice as an educator. Daily soccer practice, planning, Saturday games, and long trips for away games contributed to the time constraints on his teaching role. In sport, time constraints were related to limited facilities as the boys' and girls' soccer teams shared one field. Each team practiced on ½ of the field. When the girls' team had a game, practice time was limited to about 45 minutes.

Indicative of his attention to his teaching role, Tom worked diligently during the summer to align his physical education curriculum with the state learning results, to reflect on his physical education program, and to develop appropriate assessments. In an informal interview Tom explained, "I did a lot this summer [with physical education curriculum alignment] and now it just seems to be a matter of continually making changes... you find they are looking for even more than what you have done." Also, Tom organized his physical education curriculum cognizant of his coaching responsibilities in the fall semester. After the soccer season, units that required extensive planning and equipment setup (e.g., ropes course) were conducted.

As an experienced professional, Tom understood the cyclical nature of his responsibilities as a teacher/coach. Therefore, he knew when to foreground particular teaching and coaching responsibilities. For example, Tom stated that after the soccer season he would be able to "get back instep with the faculty" and reengage in committee work. He noted that the demands placed on teachers in his school had increased in recent years. Although Tom refused to dwell on time constraints associated with his dual role he noted that teaching and coaching were "exhausting."

> Especially in teaching, there are so many more committees and so many more meetings that never existed a few years ago…And then with the league that we are in, there is so much time that we have to spend just traveling, just on the road.

Despite the long hours associated with teaching and coaching, Tom believed that "good" physical education teacher/coaches couldn't do anything else. Here, "good" refers to teacher/coaches who centralize student/athlete learning and growth rather than their ego or personal interests. Tom viewed teaching and coaching as a calling.

> You couldn't, they [physical education teacher/coaches] couldn't do anything else. And if they were worried about how hard they were going to have to work, or how little they would get paid, they should do something else. I think the two [teaching and coaching] most of the time go together.

Meaningful Relationships

Relationships served as a source of social capitol (i.e., defined as the density of interaction among students, teacher/coach, and school), that Tom accessed through his use of the teacher/coach role (Callero, 1994). The teacher/coach-student/athlete relationship served as a foundation for learning in physical education and sport. This was the central principle that guided Tom's work as a teacher/coach. Tom cultivated positive relationships with his students and athletes; and positive relationships among his students and athletes. Positive relationships were bound by reverence, fairness, and opportunity. First, Tom showed reverence (i.e., respecting fellow human beings flaws and all) for all student/athletes regardless of skill or ability. Second, fairness and the principle of "the golden rule" guided Tom's social interactions (e.g., Tom-student/athlete, and student/athlete-student/athlete). Third, Tom centralized the importance of second chances and provided opportunities for the "underdog."

Reverence. Role is a tool for creative action that is structured by the nature, type, and meaning of role (Callero, 1994). The meaning of Tom's teacher/coach role was

shaped by his reverence toward others in social interactions. Field notes and interview data indicated that reverence served as a powerful-shared connection among Tom and his students and athletes. Tom modeled reverence in his interactions with colleagues, school custodial staff, officials, and his students/athletes. Tom used his role as a teacher/coach to structure the environment in physical education and sport with clear boundaries but without intimidation or fear. Therefore, relationships in physical education and sport were forged in a caring, reverent context. Tom stated,

> I don't think there is any other way to survive or be successful than to do it that way [be respectful toward students/athletes]. I don't ever want the student to feel uncomfortable or challenged by my authority. But on the other hand you know they have to know that there are boundaries and that we just try to strike a delicate balance there. If you are going to learn there has got to be a freedom to be successful and a freedom to make mistakes.

A reverent and caring context was evident in student and athlete actions in class/practice and in interviews. Paul described the environment in soccer practice as follows, "But he is kind of like our friend almost. The atmosphere, there is no intimidation or anything. You just have to work hard for him." Clark, a sophomore soccer player said,

> Everyone has so much respect for Coach Samuelson...because he is such a nice guy. If you think you are doing something that would disrespect him, you wouldn't find anyone on the team who would be doing that. He always talks positive.

Alice, a low skilled student in physical education, said in an interview,

> He really just wants you to do good in his class. He doesn't want anyone to fail or anything like that. He is a really nice guy. He always gives us comments like, 'Good job, or you are doing really good, oh that needs a little bit of work but you are coming along.' He just says things that make people proud of themselves in a way.

Students and athletes implicitly understood Tom's expectations for treatment of each other based on his reputation and history at the school. Although students didn't use

the term reverence, their words describe an environment where people and learning were treated with reverence. Flora, a 9th grade student in physical education articulated Tom's expectation of reverence toward fellow classmates in an interview.

> So everybody just generally knows here to be respectful you know and be patient with others who are having trouble learning. It might be stalling the class a little bit to re-explain it but just be patient…everybody knows just be respectful.

How reverence influenced the pattern of relationships among Tom and his students and athletes was complex. For example, one rainy summer evening, Tom and his soccer team attended an international prep school soccer tournament as spectators. Tom made reference in practice to the talents of the tournament teams. Tom held the skill of these players, and their ability to play the game well in high regard. Reverence between Tom and his team, and toward a well-played game of soccer, was captured in this excerpt from field notes.

> He [Tom] sits on the bottom bench of the bleachers. It is the only bench exposed to the elements (rain). Five players sit next to him even though there is plenty of space under cover. He [Tom] says little to his players during the game but smiles and makes a few comments at key plays. After the first game is over Tom stands on the edge of the field as the team warms-up for the next game. Within a minute most players on the team are standing next to Tom on the side line and politely talking with him about the game they just saw, and asking about the players on the field. As I see the team next to Tom in the rain I can only think that they have a sense of reverence toward him. They are a very unassuming and humble group.

This is a poignant example of Tom's magnetic qualities. His players wanted to be around him, to share the experience of a well-played game of soccer and an opportunity for casual banter, even if this required standing in the rain.

Golden rule. A second finding that supports the connection between relationships with student/athletes and Tom's work as a teacher/coach is a guiding principle that participants referred to as the "Golden Rule." Tom stated,

> You can start with the golden rule. 'Do to others as you want others to do to you.' But to get the best out of anybody you have to be treated decent....You just get more out of people if you treat them just how I would want to be treated....I want to be treated as if I am a part of it that I make a difference that I make some type of contribution.

Alice, a student in physical education also mentioned the "golden rule" when asked how students knew the behavioral boundaries in physical education.

> I mean you have to respect everybody it is the 'golden rule.' You want to treat others the way you want to be treated. I think that a lot of kids in my class understand that because I mean we are in high school now.

Tim a student in physical education and a senior soccer player said in an interview,

> You just can't be a jerk or anything. It is pretty much like treat others as you would want to be treated. It has a lot to do with respect too. I think everyone- he is like the only one in the school who everyone has a lot of respect for.

Fair treatment, reverence, respect, caring, and the "golden rule" were part of Tom's dual role schema (i.e., taken-for-granted rules, and generalized procedures that underlie social life) that allowed Tom to foster healthy relationships in sport and physical education. A feeling of mutual respect and the unquestioning acceptance of his performance expectations were a result of this relationship among teacher/coach and student/athlete. Bill, a senior soccer player, explained

> Coach, he knows how to get the best out of everybody. Like at first you don't know how but every year you gain more respect for him because he listens to you.... When he speaks you listen. He doesn't have to be loud; he doesn't have to- we all listen to every word he says, because like I said, he means what he says.

Looking out for the underdog. Another aspect of the central importance of relationship building in the learning process was Tom's attention to the underdog and second chances. Tom reflected on his own experiences in high school sport, which were marred by limited support and encouragement.

> I am a great believer in teachers, and those who work with youth, to see the potential of what they [students/athletes] might be. And sometimes you learn a lot from perhaps what didn't take place in your own life as well as what did. I never really got any encouragement to do anything.

An opportunity, especially for the "underdog" or a second chance after a student or athlete made a poor choice was central to Tom's work as a teacher/coach. Tom used his teacher/coach role to provide additional opportunities that might not be given to all student/athletes.

> I always look out for the underdog. I have had a lot of those kids become pretty good soccer players...don't always look for those who are quite obviously going to be hotshots ...and a little bit of encouragement can go a long ways.

The opportunity to make a poor choice and be forgiven for a transgression was supported in Tom's action and words. Field notes indicate Stan was the beneficiary of Tom's second chance policy after he had an outburst with a teammate in a game. Tom said,

> Stan, I know what he is made like. I think it is important if someone messes up you give him a chance to redeem himself....He [Stan] didn't really say too much. When I was standing over there and he was fighting back you know crying. People are complex and that is the way he covers up.

Concern for the underdog in physical education was evident in Tom's attention to his lower-skilled students. Throughout a unit of Pickleball, Tom monitored, demonstrated, provided physical assistance, and encouraged the progress of four of his lowest skilled students more than any other students in the class. Tom stated in an informal interview, "Did you see in this class...that they are finding their place. Alice is accepted for what she can do. She doesn't have to go run and hide." This doesn't suggest that higher skilled students were neglected. In fact, Tom's class structure included opportunities for students to help others learn at appropriate challenge levels. Juniors and seniors often paired up to practice more difficult shots. Alice commented,

> I mean I have a really good mix of kids in my class...everybody in my class now they are really fun and we all support each other. We don't down each other we don't make fun of each other... We kind of support each other like a team. Like in gym class.

Community Culture Valued

A third category was that Tom valued the culture and landscape of his students' lives. His work as a teacher/coach for 34 years in the same school allowed Tom to have both an appreciation for and an understanding of the community. He was able to grow and change throughout his career, which was shaped by the local community. As a result, he was accepted (i.e., supported) and his work became part of the community's fabric (i.e., social structure), which supports that roles can be used by others besides the role incumbent. Many youngsters in the community took part in Tom's youth summer soccer clinics, and his soccer team enjoyed the support of the local community at games. Tom said in an interview,

> As I look back a lot of people do not stay in the profession long enough to reap the type of rewards that I have. They exit too soon...I have had freedom here to run the program [physical education and soccer]. They have always had confidence enough in me to know that I can, that we can, have good programs...and not to put unrealistic constraints, or put boundaries around me.

In part due to his longevity and acceptance in the community, the position Tom created as a physical education teacher/coach allowed him access to community support, which afforded him autonomy to develop his physical education and soccer programs, as he deemed appropriate.

> Support for the program [physical education] it is great here. It is respected and appreciated by faculty, administration and students. I am very fortunate that the kids basically enjoy physical education, so they get something out of it. It is not just activity.

Tom noted, "It [support] is taken for granted. We are talking about a program that started 34 years ago and there has been only one coach. Tom said in an interview,

> Part of my longevity…I pretty much just stay out here and I don't get involved in politics. I do my job as best I can. I am concerned about the kids... I am not a political person and I don't rally. That is just not my makeup. So I say let's see if we can get this implemented or eliminated or what not. I guess partly I stay out here and do what I do.

Tom was both unassuming and humble about his accomplishments with students and athletes. A successful high school varsity soccer program, popular youth soccer clinics, and an innovative physical education program enjoyed widespread community support. Tom's role as teacher/coach was recognized (i.e., accepted) by this community as a legitimate cultural object and had high cultural endorsement. Tom stated,

> A lot of that [support] comes because these people played. It [soccer] has become a tradition for sure. I remember a quote… 'Tradition goes for so long that it is a force that holds the power of law.'…I think it is good because we have a community that knows me. I have a feeling and an appreciation for the community.

Tom's summer youth soccer clinics were often the first contact that students in elementary school had with Tom. Often parents knew Tom, as they were former students or athletes. Paul, a senior soccer player said in an interview,

> Since like third grade I went to Mr. Samuelson's soccer clinics. We have been doing the same footwork moves for all those years. It is just I have been <u>dreaming</u> about this year – that is all I used to think about. I remember going over Timmy's house and we would be like, 'We are going to win the state championship when we are in high school.'

Despite the widespread support for his programs, Tom was quick to point out that he never used his status as a successful coach to gain an advantage in the school.

> I have never tried to take advantage or anything of our success or to use them to you know get favors or to get our way… On the other hand I try to work well with Ken [athletic director] on different issues. But I have never tried to throw my weight around.

Tom had the support of this community in part because he understood its unique characteristics. In this coastal community many families depended on fishing and lobstering for their livelihood. Tom understood this unique feature of the community and how his student/athletes were shaped by the culture of the fishing industry. Tom noted, "...they want to be their own boss. They like the freedom of being outside...if they work hard they can make good money and a lot of them have a head start because they come from families [who lobster]."

Summer practices were scheduled at 6 pm to allow time for lobstering (i.e., trapping lobsters), which usually began at dawn. Jared, a senior noted, "I lobstered this summer. I had busy days. It is fun being on the water and being on a boat." Bill another senior on the soccer team explained,

> In the summer I went lobstering, which is the big industry around here. There are a couple of other kids on the team who also did lobstering. That kept me in shape for soccer all summer because you are standing on a boat early in the morning rocking side to side. You are constantly just working and it is real physical.

His keen awareness of the landscape and culture of his athletes' lives shaped his instruction. Tom provided a rationale for his approach to instruction with his soccer team this year,

> You have to value the insights of the players. They are out there. They see things, they are intelligent, they put in a lot of time playing, especially with so many seniors... This group of guys, you can tell they are a group of kids that you need to keep active. They improve most of all by competing against each other to keep them sharp. This 8 v 8 early in practice they just eat it right up. I have not used that for 11 or 12 years. [For them] that is a very important part of practice.

Tom respectfully described his soccer team as primarily a group of "blue-collar kids."

> Potentially that was a difficult group. I feel good about the way things turned out and what we were able to accomplish. The respect the players had for each other and how hard they worked for me because that to me is the crowning experience.

> Not the undefeated season but the fact that we were able to be a really good team and care for each other.

The local community supported Tom which allowed him access to social, cultural, and material capitol through his dual role. Field notes revealed further evidence of Tom's stature in the community. The athletic field was named in Tom's honor and displayed a wooden sign "Samuelson Field" that recognized Tom's seven soccer state championship titles. In the gymnasium, Tom's influence was evident. The gymnasium was filled with championship banners. A closer look in the gymnasium shifts the focus to the quality physical education program with high ropes, exercise bikes, therapy balls, and a well-equipped weight room. Years of collecting bottles to purchase fitness equipment, writing grants, and careful attention to the upkeep of equipment enabled Tom to have a plethora of equipment to challenge and engage all his students in physical education.

One reason Tom maintained his dual role as a physical education teacher and coach in this school was because he felt that he made a difference in the lives of his students/athletes, and members of the community. Tom commented that he would like to be "...remembered as a physical education teacher who made a difference for kids." Tom said,

> You must feel that whatever you do it makes a difference. You are just kind of a catalyst; you provide situations where kids succeed. Even though it is often inadequate you give them your best as far as your knowledge and expertise are concerned, so that they can develop some degree of competence... I don't need any attention directed at me. There are a lot of these things that only they can do. I just try to provide an opportunity for them to accomplish the stuff and not get in the way too much.

Discussion

This study is important as it acknowledges how the dual role of teacher/coach is utilized as a resource to influence actions and create structures in physical education and

sport rather than as a constraint due to role conflict. Callero's (1994) resource perspective of role provides the theoretical framework in which roles are defined as cultural objects; and roles are viewed as resources in the production of agency and structure (Callero, 1994). In this study, Tom was exemplary in his dual role because he accessed resources through the teacher role and the coach role and structured a compatible dual role.

Three topics will be addressed in this section. First, findings that contrast previous research will be discussed. Second, Woodruff's (2001) construct of reverence and Callero's (1994) resource perspective of role will be used to explore how the dual role was used as a resource with implications for pre-service teacher education. Finally, suggestions for further study will be addressed.

Two findings contrast previous research. First, previous research conducted with teacher/coaches found that teacher/coaches had different goals and expectations for teaching and coaching that resulted in role conflicts (e.g., Chu, 1984; Bain, 1983; Locke & Massengale, 1978; Massengale, 1981; Sage, 1989a, 1989b). In contrast, the goals and expectations Tom had in physical education and sport were compatible and similar. Rather than polarizing the roles, the dual role facilitated Tom's effectiveness as an educator (i.e., teacher/coach). The dual role was a "natural fit" because Tom integrated his dual role responsibilities into one position. "One of the most important strategies for gaining influence and exercising power is to use roles as a resource for altering social structure" (Callero, 1994, pg. 240). According to Baker and Faulkner (1992) the combination of multiple roles into a single position is a highly effective strategy to access cultural (e.g., reputation), social (e.g., people networks), and material capitol. The dual

role position of teacher/coach provided Tom with avenues to work with student/athletes and with the tools to achieve their common goals.

A second contrast to previous findings was that Tom did not divide his position into primary and secondary roles. Previous research found that teacher/coaches sometimes claim one role as their primary role at the expense of the other role (Chu, 1984; Segrave, 1981). Tom claimed both roles and one use of the dual role was as a source of identity. Tom was identified in the school and community, and identified himself, as a teacher/coach. The result of this social definition was that Tom was placed in a recognizable social category which provided participants (e.g., students/athletes) with a sense of security, purpose and direction to understand Tom's actions (Callero, 1994). According to Callero (1994) roles, therefore provide meaningful continuity across situations, linking particular moments, which was salient in Tom's role as a teacher/coach committed to maximizing the potential of both students and athletes in physical education and sport.

The dual role enabled Tom to provide opportunities for students and athletes that he would not be able to secure if role were not available as a resource. According to Sewell (1992) "Occupancy of different social positions (e.g., teacher and coach) gives people knowledge of different schemas and access to different kinds and amounts of resources and hence different possibilities for transformative action (pg. 21)." Tom's actions in physical education and sport, as an exemplary teacher/coach, were possible in part because he integrated schemas and resources associated with both roles into his dual role position.

These findings are not surprising as this participant was purposefully selected as an exemplary physical education teacher/coach who had a reputation of success in both roles. It may be expected that he would have resolved conflicts and found ways to adapt to the dual role over his 34 years as a teacher/coach. Tom noted that many teacher/coaches leave the profession too soon. He indicated that he learned and made adjustments every year to better meet the needs of his students and athletes. What is compelling from this study was that Tom used his dual role as a resource which allowed him to be successful in both roles.

Reverence

As a resource, roles enable one to control and dominate (Callero, 1994). Roles with a positive cultural evaluation are more effective tools for gaining power, some roles, such as Tom's teacher/coach role, can be used to gain access to cultural, social, and material resources (Baker & Faulkner, 1991). Woodruff's (2001) construct of reverence (i.e., a cultural resource) may initially seem an unlikely resource that a physical education teacher/coach would use in their dual role; however, reverence bound social relationships and learning in physical education and sport. From a resource perspective of role, schemas (i.e., taken for granted rules) and resources (i.e., an object that serves as a source of power) constitute structure; and structure is carried in the reproduced practices that have become stable (Callero, 1994). Evidence of reverence as a resource was seen in the practices that were stable in physical education and sport. These practices included mutual respect, self-responsibility, and group interdependence.

Reverence is the capacity for respect, awe and shame. It is the capacity for awe, as it grows, that brings with it the capacity of respecting fellow human beings (Woodruff,

2003). Collectively, learning took place in a context of mutual respect. Tom did not try to be all knowing; he acknowledged that he learned from his students and athletes (Woodruff, 2001). Students and athletes showed loyalty toward Tom as a teacher/coach from whom they had much to learn. Tom treated his student/athletes respectfully as fellow-learners. This respect came in part from sharing a great project, that of learning to play soccer as a means to maximize potential and to learn to accept others in physical education and sport. Woodruff (2001) said, "Respect is a feeling associated with sharing a great project, one that has an aim that is worthy of reverence." In this context of mutual respect among students/athletes and teacher/coach, learning was treated with reverence.

As a reverent teacher/coach Tom fostered curiosity and the desire to learn in all his students/athletes through the shared goal of learning. In the sport context, Tom foregrounded respect and care for each other over winning games. He was satisfied with his season because the players had respect for each other. He said, "The respect the players had for each other…not the undefeated season but the fact that we were able to be a really good team and care for each other." In physical education, learning was a shared goal, which was manifested in ways unique to individual students. For some students, it was the improvement of specific skill or strategy, and for others the development of a sense of belonging and acceptance by the group.

Reverence toward learning and students/athletes were also seen in the opportunities Tom provided student/athletes for self-responsibility and group interdependence. In physical education, the structure of the learning environment enabled students to function independently in self-directed learning activities without constant interruption. In sport, Tom valued the perspective and knowledge of his players. He often

remained silent while players helped each other learn. Players commented that when Coach Samuelson spoke they all listened because he often remained silent, and when he spoke he had something important to say. Woodruff (2001) notes, "The silence of a great teacher expresses awe and respect-awe for the enormous subject that is being learned and respect for the students who are learning it under their own power, undiminished by any interference from the teacher." (pg. 188). Woodruff (2001) said, "Students must learn the answers for themselves, not from his words, but through their own lives" (pg. 188). When good teachers listen to their students in this they are reverent.

As a reverent teacher/coach, Tom used his role as teacher and coach as a vehicle to reach student/athletes. Tom centralized the student/athlete rather than the content (i.e., soccer) or context (i.e., sport, physical education) in his work. Tom used the position he created in his teacher/coach role by using reverence as a resource to develop significant and meaningful relationships with students and athletes, which facilitated the learning process and lead to his satisfaction with his dual role. Relationships, a type of social capitol, allowed Tom to connect with his student/athletes and reach his intended goals.

In the U.S., inherent power differences exist between students/athletes and teachers or coaches (Coakely, 1998). Reverence allows groups of people to treat others with the respect and civility as it provides boundaries for social interactions. Reverence is a resource that glues together a group where there are big differences in power and can be used to create avenues of respect and languages for the expression of respect between people (Woodruff, 2003). Reverence was a resource accessed by Tom that was available based on how he claimed and enacted his dual role position.

Conclusion and Implications

In light of the findings from this study, there are two implications for pre-service teacher education. First, pre-service physical education students may need opportunities to examine and reflect on their career goal of teacher/coach to better understand the complexity of this work. If current pedagogy texts are an indication of the content of teacher preparation programs, then the dual role of teacher/coach is either ignored, or discussed only as a source of role conflict. Classroom experiences, such as observations and interviews with teacher/coaches, and fieldwork in teaching and coaching simultaneously are recommended as part of pre-service teacher education for teacher/coaches.

Second, findings from this study indicate Tom's work as a dual role professional was student/athlete centered, rather than content (e.g., soccer) or context (e.g., sport or physical education) centered. This finding has implications for pre-service teacher education. If pre-service teachers can understand the work of the teacher/coach as centralized around the learner rather than content or context, then the importance of both roles are illuminated as a means to foster learning. When the work of a teacher/coach is organized this way, the marginalization of physical education, and the prestige associated with a successful interscholastic sport program may not interfere with the commitment to both roles (Coakely, 1998). Tom was able to connect with a variety of students, with a wide range of interests and abilities; and sport and physical education provided opportunities for Tom to develop and share his extensive soccer knowledge.

Several questions remain to be answered through future research. Additional research on the work of exemplary physical education teacher/coaches in a variety of

contexts (e.g., high performing schools, low performing school) needs to be conducted to further understand the influence of context on the uses of the dual role, and types of resources available to exemplary teacher/coaches. By extending the theoretical framework beyond a traditional conceptualization of role, to a role as a resource perspective we will also be able to examine how schools as institutions use the dual role of teacher/coach as a resource. It is important to remember that in addition to the role incumbent (e.g., teacher/coach), institutions as well as other individuals have access to the dual role. In the context of the NCLB (2001) were student performance is examined at an institutional level, understanding how schools as institutions use aspects of the dual role, with the possibility to enhance reputation to attract high performing students, is an important question to answer through research.

CHAPTER 5

DISCUSSION

Physical education teacher/coaches are popular figures in the media with portrayals that sometimes malign them as uncaring tyrants in physical education and revere them as heroic figures in sport (Miracle & Rees, 1994). Yet the work of physical education teacher/coaches is often idiosyncratic and not easily captured in such opposing characterizations (Templin, Sparkes, Grant, & Schempp, 1994). Factors such as the high status of sport (Coakley, 1998), marginalized status of physical education (Sparkes, Templin, & Schempp, 1993), role preferences (Chu, 1978; Segrave, 1981; Yalcin, 2000), and pedagogical content knowledge (PCK) may influence the work of teacher/coaches. Exemplary physical education teacher/coaches often possess knowledge of both content and of learners, which indicates well developed PCK.

Over the last 30 years, the multiple role demands teacher/coaches encounter, and their responses to them have been the focus of much research (Bain, 1978; Bain & Wendt, 1983; Chu, 1981, 1984; Locke & Massengale, 1978; Rupert & Buschner, 1989; Sage, 1989a). Researchers found that in response to time demands and commitment to the coaching role, physical education teacher/coaches often reported a negative impact upon their teaching (Locke & Massengale, 1978; Earls, 1981; Chu, 1978; Segrave, 1981; Yalcin, 2000). Nevertheless, physical educators continue to work as dual role professionals despite the apparent complexity of this work (Gerdy, 2000; National Federation of High Schools, 2000-2001). Today, teacher/coaches lead one-third to one-half of all high school sport teams (Clark, 2000).

Only a few studies have examined the behaviors of teacher/coaches in physical education and sport (Jones, Protrac & Ramalli, 1999; Ormond, 1988; Rupert & Buschner, 1989; Spencer, 1999). These studies captured the pedagogical behaviors of physical education teacher/coaches across both settings and revealed differences between teacher and coach behaviors, with more positive behaviors exhibited in the coaching context. Yet, this research does not present a holistic view of how exemplary secondary teacher/coaches structure their learning environments. Exemplary teacher/coaches often find satisfaction from their dual role of teaching physical education and coaching sport and do not subjugate their teaching responsibilities for coaching responsibilities (Spencer, 1999). The voices of exemplary physical education teacher/coaches situated in the context of physical education and sport have been noticeably absent in the literature.

Ecological Perspective

Work as a teacher/coach has been identified as a contextual factor that often negatively impacts the work of secondary physical education teachers (Stroot, 1994). If learning environments are viewed as an ecology with common functioning systems then comparisons can be made between physical education and sport using Doyle's (1977, 1983b, 1986b) ecological perspective. The ecological perspective allows for the analysis to involve contextualization of events in both physical education and sport (Supaporn, Dodds, & Griffin, 2003). The ecological framework has been applied in physical education (Alexander, 1982; James, 2001; Jones, 1992; Hastie, 2000; Siedentop, 1988; Son, 1989; Carlson & Hastie, 1997; Supaporn et al., 2003; Tousignant & Siedentop, 1983) and in the sport context (Hastie, 1993; Hastie & Saunders, 1989, 1992; Griffin et

al., 1998; Pagnano, 2002). Only one study compared the ecologies of physical education and sport created by the same teacher/coach in softball (Pagnano, 2002).

A major construct within the ecological perspective is the program of action (PoA), which represents the ongoing and interrelated actions among the task systems (i.e., instructional, managerial, and social). Since all teaching/learning settings have PoAs this construct allows for a parallel examination of physical education and sport. Doyle (1986b) said, "Programs of action in classroom activities are defined by both the rules for social participation and the demands of academic work" (pg. 424). Academic work is directly involved in the process of achieving classroom order and can be shaped by teachers' management decisions (Doyle, 1986b).

The PoA is conceptualized with two major zones (i.e., primary, secondary) of activity known as vectors (Merritt, 1982). Vectors of activity represent movement and management of the events and activities in the classroom, and as vectors are entered into, they have the ability to pull events and participants along a particular course (Doyle, 1986b; Hastie, 2000). Every learning environment features the primary vector, which consists of the main flow of class or practice events. Researchers found secondary vectors were created by student (e.g., misbehavior) or teacher actions that challenged the strength of the primary vector, thus pulling or pushing it off its intended direction weakening it (Hastie & Siedentop, 1999; Supaporn et al., 2003).

Recently, the PoA has been conceptualized on a continuum from casual to robust (Hastie, 2000; James, 2001; Pagnano, 2002). In a casual PoA teachers and students coexist in a relaxed, positive and non-confrontational environment (i.e., "no-sweat") (Siedentop et al., 1994). This "no-sweat" environment (i.e., casual PoA) does not

promote significant learning in physical education, which is typical of many secondary physical education programs in the U.S (Griffey, 1987; Stroot, 1994). A robust PoA contributes to an ordered classroom with a strong focus on content development and ongoing social interactions (Hastie, 2000). In a review of research on the ecological perspective Hastie and Siedentop (1999) argue that further research needs to be conducted on settings characterized by strong PoAs.

The present study examines the work of an exemplary teacher/coach teaching and coaching the same activity (soccer) in physical education and sport which has not been examined in previous research. Researcher have noted the potent effects of the social setting on teaching and learning (Brown, Collins, & Druguid 1989). Since learning can be viewed as a social practice in social settings, an examination of the PoAs situated in physical education and sport is salient. Physical education and sport are influenced by the context within which they are situated, but previously few researchers have documented the influence of context on the PoA. The focus of this study was how the PoAs were enacted by the same exemplary teacher/coach teaching a unit of soccer in physical education and coaching varsity soccer.

Methods

This is an instrumental case study (Stake, 1995) of an exemplary physical education teacher/coach teaching a unit of soccer in physical education and coaching soccer used to examine the ecologies in physical education and sport as experienced by the participants. Case study design allowed for the exploration of how the PoA in physical education and sport was constructed (Sanders, 1981). Understanding how an

exemplary teacher/coach structured learning environments in physical education and sport was an important focus of the present study.

Role of Researcher

In qualitative case study research the researcher is the primary instrument of data collection and analysis (Merriam, 1998); therefore, biases and experiences of the researcher are relevant. First, I was an experienced physical education teacher/coach. For 10 years I was a high school physical education teacher and varsity coach of soccer, gymnastics, and track & field. Second, during my tenure as a teacher/coach I found satisfaction as a dual role professional. Finally, I understood aspects of the community as I lived in a neighboring town for twenty years.

Setting/Participants

Pseudonyms were used for all participants and places. Appropriate university informed-consent procedures and human subject approval were obtained from all participants. Participants included Tom Samuelson (i.e., Mr. Samuelson, Coach Samuelson), a high school physical education teacher and varsity soccer coach and his physical education class (N=14), and varsity boys' soccer team (N=23). Participants in the physical education class included 8 male and 6 female students in grades 9-12 (all were Anglo). Three male students were also members of the varsity soccer team. Participants on the boys' soccer team were in grades 10-12. Physical education met 40 minutes every other day for 1 semester. Fifty percent of the students and athletes (i.e., 7 students in physical education, 11 athletes in sport) were selected as target students/athletes for interviews.

Tom was purposely selected for this study. Selection was based on the recommendation from two athletic directors who were asked to identify an exemplary teacher/coach. Based on the recommendations, the researcher observed Tom teaching physical education for three days. The focus on learning, coupled with the recommendations and discussions with Tom and his colleagues indicated that Tom was the appropriate participant for this study.

Tom was employed for 34 years at a small (N=337) coastal northeastern regional high school. Tom held a masters degree in physical education and was a certified strength and conditioning coach. Tom also taught coaching certification courses, and directed a summer youth soccer camp. The soccer program had a long tradition of success, which included 7 state team championships. Tom's soccer coaching record, one of the best in the state, was 360-127-40. When data were collected the team finished the regular season undefeated (16-0) and won the league championship.

In previous years, Tom had been nominated for state physical education teacher of the year. His innovative high ropes course and fitness activities, with a focus on strength training, were hallmarks of the physical education program. Prior to the study, Tom completed extensive summer curriculum work to align the physical education curriculum with state learning results.

Data Collection

Data were collected through passive participant observation. Data were collected throughout (a) an 11 week fall soccer season (31 soccer practices and games), (b) a 3-week physical education soccer unit at 7 class sessions (40 minute classes), and (c) for extended portions of the school day (i.e., researcher shadowed Tom through school day).

For the purpose of this study, 10 soccer practices (i.e., one from each week of the season) were used for the ecological comparison. Also to become familiar with this high school context the researcher began observations in physical education classes on the first day of school and continued throughout the end of the first quarter. Data were gathered from five sources: (a) descriptive field notes from class, practice, and school observations; (b) formal interviews with Tom; (c) formal interviews with students/athletes; (d) informal interviews with all participants, and the teacher/coach's colleagues; and (e) class and practice documents.

Descriptive field notes. Field notes were recorded with description of instructional, management, and social tasks, responses to tasks by student/athletes, and descriptions of teacher/coach behaviors. Extended field notes were word-processed after each observation and researcher's observer comments were included. All physical education soccer unit lesson's and 10 soccer practice sessions were videotaped to create a permanent record.

Interviews. The teacher/coach participated in three formal 90-minute interviews throughout the research process. The interviews focused on: (a) participant's personal/professional background, (b) description of his responsibilities and role as a teacher/coach, and (c) reflection on the physical education soccer unit, sport season, and his work as a teacher/coach.

Formal 30-40 minute semi-structured interviews were conducted with target student/athletes. Fifty percent of the students and athletes (i.e., 7 students in physical education, 11 athletes in sport) were interviewed. In physical education, target students included 3 females (2 low skilled, 1 high skilled) and 4 males (2 low skilled, 2 high

skilled); and in sport five starters, and five non-starters. Skill level and gender was used as selection criteria for target student/athletes in an attempt to represent a range of perspectives on the class/practice. Student/athlete interviews focused on the participants' background in sport and physical education, expectations for learning, and reflection on the season/unit. Informal interviews were conducted daily and usually involved a single question. The focus related to how participants' made meaning of events in the class or practice session, and clarification of observations.

Documentation. Documentation that related to both the physical education and sport setting were collected. Examples of materials collected included class and practice plans, review sheets, tests, school athletic code, and copies of a detailed curriculum guide.

Data Trustworthiness

To provide for trustworthiness of the data collection and analysis, triangulation among the data sources and across participants, prolonged engagement, and member checks were used (Lincoln & Guba, 1990). First, the multiple data sources and 38 participants allowed for triangulation across sources and participants. Second, prolonged engagement occurred as the researcher spent extended portions of the school day shadowing Tom and observing class and practice sessions throughout the fall sport season and first quarter of the school year. Finally, member checks occurred by providing the teacher/coach with initial categories of results and the opportunity to indicate disagreements with these results. Portions of the final interview also provided an opportunity for Tom to clarify aspects of the program of action in physical education and sport as identified by the researcher. To explore my biases, I maintained a reflective

journal to document feelings, experiences, and perceptions throughout the research process. The reflective journal was used to generate discussion with a critical friend.

Data Analysis

Data analysis was on-going throughout the research process (Merriam, 1998). Interview transcripts (e.g., student/athlete and teacher/coach) and field notes from live and videotaped observations and documents were inductively coded using constant comparative methods (Strausss & Corbin, 1998). The purpose of the coding was to search for similarities and differences in the PoAs and to develop categories with mutually exclusive definitions, properties, and dimensions. Further analysis of observational field notes based on Rink's Games Stages (1998) was conducted to categorize results into the four games stages. The games stage analysis provided a lens for a parallel examination of content development in sport and physical education. Level of instructional task explicitness (e.g., explicit, partially explicit, implicit, routine) was coded from videotaped observations. Analysis of task explicitness was conducted because level of explicitness has been associated with order in the learning environment (Doyle, 1986b).

To verify appropriate pedagogical practice observational field notes were analyzed for NASPE's (1998) appropriate practices for high school physical education which provided an additional lens to explore the PoA (see Table 3). Once categories were developed from inductive, games stage, task explicitness, and appropriate practice analysis, more general themes were identified that were inclusive of several categories. Themes and categories were interpreted in relationship to the PoA.

Results

The PoAs developed in physical education and sport were situated within the context of a well-designed quick-paced soccer unit in physical education and a successful sport season with a varsity soccer team lead by an exemplary physical education teacher/coach. Since the PoA represents the ongoing and interrelated actions among the tasks systems, contributions that each task system (instruction, management, and social) made to the PoA will be featured situated in physical education and sport.

Physical Education PoA

A profile of a physical education class is used to illustrate the robustness of the PoA, which represents the overall 'learning" nature of physical education class. Results across all data sources support that the PoA in physical education was on the robust end of the robust-to-casual continuum (Hastie, 2000) with considerable momentum and direction. The class profile will be followed by a description of the task systems in relationship to the PoA.

Physical Education Lesson Profile

Each physical education class began indoors with a fitness circuit, followed by skill practice, and ended with modified game play. Students eagerly entered the gym and immediately began the fitness circuit [class routine]; they examined the task sheets posted and completed work at stations (usually 4-6 stations) often helping each other [student-initiated task]. Each week a new fitness circuit was designed to peak student interest and to change the fitness focus [concern for student engagement in learning]. Tom took attendance [efficient time use] and provided on-going feedback to students during the fitness circuit [active supervision as accountability]. When students were done with the

circuit, they dribbled a soccer ball outside for skill practice [efficient time use]. Tom used demonstrations to present soccer skills. Tom began with a brief review [provided practice opportunities], and then a new skill or tactic (e.g., juggling, dribbling, passing, moving and passing, attacking moves, and defending) for the day. Tom's attention was often directed to low-skilled students throughout class. He gave prompts, praise, and specific skills cues to all students to keep the pace of class brisk [accountability for task engagement]. Modified game play occurred the last 8-10 minutes of each class. Students enthusiastically engaged in game play. Tom provided feedback to students during game play, which allowed students to learn while having fun [maintained learning focus].

Robust Physical Education PoA

The PoA consisted of a strong primary learning vector which featured the instructional task system. Order, a necessary component of a robust PoA, resulted as class flowed quickly and smoothly from one instructional task to another. Tom's effective use of appropriate pedagogical practices (see Table 3) as recommended by NASPE (1998) contributed to the strength of the primary learning vector. Further, Tom's reputation among students as a caring, respected teacher/coach dynamically influenced the PoA as mutual respect between Tom and his students contributed to learning, order, and positive social participation.

Instructional Task System

The instructional task system was a central aspect of the primary learning vector of activity which contributed to the robustness of the PoA. The instructional task system consisted of a series of well-defined, quick-paced soccer and fitness activities. In an interview Flora, a student, stated, "I was learning the whole time [in physical education].

It [soccer] is a new sport to me." Field notes and interviews indicated that students were responsible for skill development in the four games stages (Rink, 1998) and for positive group interactions. In an interview Lance, said, "He was trying to teach us some skills, how to get away from a defender or to pull a good move...to fine tune our skills."

Content development. Sequenced content development (i.e., through games stages) is an appropriate practice identified by NASPE that was evident in Tom's teaching. The games stage analysis indicated that soccer content development was balanced with tasks that included all four stages (Rink, 1998). The games stage analysis revealed that skill development (Stage 1, 31.6%), skill combinations and strategies (Stage 2 & 3, 27.8%), and modified game play (Stage 4, 8.9%) (see Table 4) were included in the soccer unit. Tom sequenced tasks from simple to complex within each of the four games stages. In an interview Tom described the game as the "best teacher" as game-like conditions "increased the urgency" and maintained student focus on quality performance. In this Stage 1 task field notes illustrated Tom made the task competitive (i.e., game-like) and held students accountable through public reporting of their score.

> See how many passes you can get in 60 seconds [Tom sets his watch]. See what you can do in 60 seconds. Let's try to get at least 50, the more the better. Concentrate! This forces you to get in good position. Get off your heals and on your toes. Another ½ a minute you are doing good. Ok, how many did you get? [Tom checks with each pair].

Task explicitness. The level of task explicitness contributed to the momentum of the primary learning vector because quality of performance was clear and student actions (e.g., questions about performance expectations) did not slow down the pace of class. Results of the task explicitness analysis from videotaped observations indicated that soccer instructional task statements were usually explicit (57.4%) or routine (38.8%) with

respect to conditions, expected performance, and criteria (see Table 5). Task explicitness in fitness tasks were often routine (56%) or partially explicit (44%) as expected performance was not always included on task sheets. Some instructional tasks became routine and were practiced daily, which emphasized the learning focus. The tasks explicitness analysis revealed that there were clear standards for performance as evidenced in the number of explicit and routine tasks.

Field notes indicated Tom often presented soccer tasks with a brief verbal description and demonstration (e.g., teacher or student). He then closely monitored students. For example, Tom presented this Stage 1 task (dribbling) as follows.

> Inside this area [marked with cones] I want you to touch the ball with the inside of the foot [Tom demonstrated skill]. Every time the foot comes down I want you to touch it [ball] with the inside of your foot. You have to skip when you do this. Ok, get going with the inside of the foot touch for about a minute.

Tom then provided teaching cues (e.g., skip) and prompts (e.g., keep coming through) to students in response to their individual performance. Teacher feedback allowed students to practice tasks that Tom adjusted for individual skill level. another NASPE appropriate practice. Here are two, of numerous, examples from field notes.

> Tom monitored from the edge of the practice area. His attention shifted from student to student throughout lessons [focused on all students regardless of skill level]. For example, when he saw two students walking rather than skipping through the drill he approached each and said, "You must skip to do this. Every time the foot comes down it touches the ball...You can't do it if you are walking."

> In another example, Tom stated to a student who did the drill with ease, "Keep coming across through the group. This will give you traffic and you are going to have traffic in games" [task adjusted to student's individual level]. He continued to move around the group [active supervision to hold students accountable]. "Ok, there you go [as student does the drill with a skip], we are getting better. With a skip, don't let it get too far ahead [to student not making contact each time].

In the previous examples, Tom held students accountable for learning through his close monitoring and facilitation of the learning process through feedback and task modification. He adjusted the task to meet students' challenge level. Tom expected the ball to remain close, and for students who had previously mastered the skill, his expectation was to perform a more difficult task by moving "in traffic."

Individualized attention. Results from field notes and interviews indicated that Tom viewed learning as an individual process which was reflected through content development, and expectations. In an interview Tom described his attention to individuals, "I will most frequently try to work with an individual rather than the group...to me somewhat like we do out there with soccer [sport practice]." Tom explained his content selection,

> [I select] things that they can do and are capable of accomplishing...also that build in a degree of success... a lot of concentrated time that they are going with the ball...just let me get out of the way and let the kids do it. I just try to provide opportunities for them to accomplish stuff.

Tom also paid close attention to lower skilled students to be sure they were learning in class. In an interview, Alice, a low skilled student, said,

> If Mr. Samuelson [Tom] sees somebody doing it [a skill] wrong he will help them... he won't ever give up on you. He really just wants you to do good in his class. So, he kind of unlike some teachers who they will just settle and they won't push you harder-he does. He pushes you as far as he knows you can go.

Tom's expectation was that all students, which included low-skilled students, would grow and learn as a result of their experience in physical education. In an interview Tom said,

> I mean you have to provide something that may provoke a lifetime interest. Or [provide] something that person becomes noted for, and respected for...opportunities for kids to achieve that perhaps if you hadn't have been there they wouldn't have had that option.

In an interview, Mike, a high skilled student/varsity soccer player respectfully spoke of Tom's willingness to help students learn in physical education and sport.

> I think everyone likes him. He is our physical education teacher. Gym is the same way soccer is... I go all out in gym just like soccer. [Other] people do too... if someone doesn't want to do something because they think they will look stupid, he will say, 'I am doing it just fine I think you can.' And he will do it. He will walk you right through it. Then he will say I will check you off.

Tom's attention to an individual's learning was evident in his use of praise. Field notes showed Tom often used praise in modified games. "Ah, this is golden....Nice touch Alice...Go with it Thomas- nice...Well done you cleared it to the side...What an aggressive attack there...That is smart." Through informal interviews students stated that they valued Tom's praise because it was genuine. Alice stated.

> I mean he is really positive and he doesn't down anybody. He notices things. It is not like some [physical education] teachers who will be like 'Oh, at least they are doing it.' They will just like 'Alright, just play.' He will stop the game and say, 'Oh you see what they did, they could have done it this way-but good try.'

Management Task System

The primary learning vector of activity was supported by the management task system with well-established rules, routines, and expectations (RRE's), which contributed to the robustness of the PoA and ordered classes. Field notes indicated Tom had many efficient routines such as taking attendance (e.g., during fitness circuit), equipment distribution (e.g., ready before class), and forming groups (e.g., same teams all unit). Results from field notes and interviews indicated that when students were unclear about an expected behavior they asked a classmate, or observed a classmate's behavior.

Field notes indicated that rules were presented on the first day of class for student behavior, dress, peer interactions, and level of engagement with instructional tasks.

Through formal interviews, five out of seven students stated that Tom was clear about his RRE's on the first day. For example, Lance stated, "He just laid out all the rules the first day of class." Another student, Flora, shared that,

> He explains in the beginning of the year when he set us all down and he went over the rules and expectations of the class and how we are being graded. So everybody just generally knows here to be respectful and be patient with others who are having trouble learning. It might be stalling the class a little bit to re-explain it but just be patient.

Tom's reputation among students was that of a caring and respected teacher, which provided a foundation for student support of Tom's RRE's. Several students indicated that they just knew (e.g., based on reputation) what Tom expected. John a high skilled student/athlete described Tom's RRE's as follows,

> You just kind of know. It is just the way he is. You can't be mouthy. You can't be wise... Don't do anything like kick a ball or he gets mad. You just can't be a jerk or anything. It is pretty much like treat others, as you would want to be treated.

Students stated that the most important rule was to be respectful to others. In an interview Jim explained, "It [good behavior] has a lot to do with respect too. I think everyone- he is like the only one in the school whom everyone has a lot of respect for." Tom's rapport with students and the respect that students had for Tom contributed to order in the class which was an important aspect of the management task system.

Field note observational analysis indicated that off–task behavior was infrequent and contributed to the primary learning vector of activity. Only three incidents were identified which involved minor "fooling around" (i.e., juggling a therapy ball). Field notes indicated that Tom used desists, which were quick verbal commands to stop misbehavior, in response to a task modification which did not interfere with the flow of

class. Field notes showed that in response to task modification of a Stage 2 (passing) task Tom said, "No, no, no, just keep going like this [Tom demonstrated]."

The primary learning vector was therefore able to develop unimpeded by management tasks. Based on reputation, respect and care for students, Tom was able to gain and maintain the cooperation of his students with clearly articulated and reinforced RRE's.

Social Task System

The social task system supported and provided direction to the primary learning vector of activity. Aspects of student socialization (i.e., helping each other learn) and social participation were rooted in the agenda Tom had for learning in physical education. In an interview Tom stated that the rules for social participation included "getting along and accepting each other" that were important aspects of the physical education experience which permeated student and teacher actions in the gym. Results indicated that Tom encouraged students to help each other and to learn from each other, which students embraced. In an interview Tom said,

> They learn from each other. Usually there is a model of what they are trying to accomplish. Some will get things much quicker than others, some will get it right then immediately. Some will have learned it last year and they are able to perhaps help somebody else out. It is a mixed blessing having all the different grades together.

Another aspect of the social task system in this classroom was the development of peer interactions that supported learning. Field notes indicated that students provided information to each other about how to do tasks and would often remind each other of quality or quantity expectations. First, one example, from many that were available, showed that Fran, a low- skilled student asked Myra how to do the fitness agility ladder.

Myra said, "You have to do this one backwards." [Fran then did the drill incorrectly]. Myra said, "No, no." Myra demonstrated the drill again with the cue "Just do it backwards." Second, further results indicated that students cooperatively worked together, provided skill feedback, and encouraged each other to try new things. Results showed student talk focused on support and praise, supporting student learning and success. Mike stated, "That a way" to Myra, a low skilled classmate. Then to Alice, "That is a good pass, yes!" Third, in an interview Myra, a low-skilled junior, stated, "Everybody in my class is really fun. We all support each other. We don't down each other; we don't make fun of each other. We kind of support each other like a team. Like a gym class."

Having fun playing soccer was a form of social participation in class which contributed to the robustness of the PoA. Results from interviews indicated that having fun with friends was important. Flora said, "Out of all the classes physical education is kind of like the fun one…I think games are fun and everyone should have a chance to play." Through interviews, the opportunity to play soccer games with peers was mentioned by all participants as a constitutive part of fun. Small-sided games allowed all students to participate and be challenged. Lance stated in an interview, "He gets everybody involved in all his rules so everybody has a chance to do it. It is not really about winning in his class. It is just about getting everybody playing."

Sport PoA

In this section, a profile of a typical sport practice session will be presented to illustrate the robustness of the PoA in sport. The PoA in sport was similar (e.g., learning) to the PoA in physical education with well-developed content, enthusiastic engagement

of athletes in all aspects of practice (e.g., instructional, managerial, and social), and respectful interactions between Tom and his athletes.

Sport Practice Profile

Practice began promptly after school on "Samuelson Field," which the school board named in honor of Tom. Athletes warmed-up before Tom arrived (he often taped players' ankles in the gymnasium) [athlete initiated and directed activity]. Warm-up included informal stretching, ball handling, shooting and passing. As Tom walked onto the field he immediately called out the first drill (e.g., "circle pass series in groups of five") [routine task]. Players started the passing series without further prompts. During the drill Tom provided specific feedback to athletes (e.g., "see the field before you pass"), and occasional prompts about focus [learning focus]. When players were passing and moving efficiently [response to player performance], Tom ended the drill and used team elevators (e.g., juggling from each foot, thighs and head three times in a row) as a transition [efficient routine to increase practice opportunities]. "I want to see 10 team elevators." Throughout the season he increased this challenge (e.g., 5-11). With pride athletes called out "Got it Coach" until the team had accumulated 10 elevators [appropriate use of competition]. The next phase of practice was skill practice development which included several drill groups, as time was never wasted standing or waiting for a turn [maximize participation]. Skill practice began with a routine drill (e.g., third-player running- Stage 2 task) that was developed into a modified game (e.g., Stage 4 task). Tom used experienced players to demonstrate new drills [decreased coach talk]. He often presented a new drill two days in a row with the expectation that on day two students would be able to perform the drill with finesse [provided opportunities for

mastery]. Following skill practice Tom assigned players to pre-arranged teams for modified game play (8 v 8) on the width of the field or to a shooting station. At the end of practice (60-90 minutes) players quickly pick up all equipment (balls, portable nets) within the challenge time (30-60 seconds) set by Tom. Practice ended in a team huddle and Tom's final words such as, "We have so much potential we just have to use it."

Robust Sport PoA

The PoA in the sport context was robust and was enhanced by the shared responsibility that coach and players took to create a strong primary learning vector. Players and coach worked toward a common purpose which, results from interviews indicated, was to be the best team possible. For players, to be the best meant to be a winning team, and for Tom to be the best team included success and players' caring about each other. Players' commitment to be the best team was sustained by their respect for their coach and the school's winning soccer tradition. The primary vector was maintained through athletes' support of Tom's expectations and attention to player engagement in the instructional, managerial and social aspects of practice which will be explored through the task systems.

Instructional Task System

The instructional task system, with a strong primary learning vector, was the most prominent system in the robust PoA in sport. Effective content development through the games stages, use of explicit tasks, and use of appropriate pedagogical practices all supported the learning focus and contributed to the robustness of the PoA. Also Tom's PCK was evident as he used his extensive knowledge of soccer and his players to design practice sessions. In an interview Tom explained,

> Because of this group of guys, you can tell they are a group of kids that you need to keep active. They improve most of all by competing against each other and to keep them sharp. Like this going across the field (8 v 8) early in practice they just eat it right up. I have not used that for 11 or 12 years. That is a very important part of practice for them.

Content development. Effective content development contributed to the robustness of the PoA. Practice tasks were developed through each of the four Games Stages (see Table 4). Emphasis was placed on Stage 2 (28.1%) (skill combinations) and Stage 3 (14.1%) (offense and defense) tasks. Tasks were situated to reflect aspects of the game. Results from field notes and interviews indicated that Tom made connections between Stage 2 and Stage 3 practice tasks to game play for players. For example, while practicing a Stage 3 passing combination Tom said, "You will see it in the games and wonder why you didn't see it before." In an interview Bob explained the connection Tom made between practice tasks and game performance,

> He explains to us why we are doing it [a drill] and that helps. So instead of just doing it and being like 'Why are we doing this drill?' We know it is for a reason and it shows on the field when we win games.

Further, field notes and interviews indicated that Tom broke the game down into manageable pieces and situated practice tasks under game-like conditions. In essences he broke down the game and then built it back up through situated practice through the games stages. In an interview Bob said,

> He [Tom] works on certain things he feels we need to work on. Like we have been working on passing a lot, it shows on the field. He demands that we keep the ball down and settle the ball. We just work on it so hard in practices, repetitiously, that it just becomes natural on the field.

Tom used challenges and competition to situate tasks in game-like conditions. In an interview Steve, a starter, explained,

> You always want to be better. You always want to show the coach what you can do...You've got to get ready for the next game. We always play hard in the game, so you're going to play hard in practice.

Task explicitness. The level of task explicitness contributed to the momentum of the primary learning vector as routine tasks allowed for seamless transition between instructional tasks. Results of the task explicitness analysis from videotaped observations indicated that most instructional tasks were routine (69.4%), explicit (22.4%) or partially explicit (8.2%) (see Table 5). When Tom said, "Elevators" in pre-season, experienced players knew task boundaries, as it was routine, whereas new players relied on Tom's description and teammates' responses to determine task boundaries. For new players, partially explicit tasks resulted in initial ambiguity, but new players were savvy and looked to experienced teammates for the needed information. Mike, a senior, said in an interview, "A new player like Smitty[he] just watches and adapts right off the bat." Field notes captured the following task description of a Stage 1 task (i.e., passing) which included conditions, performance, and criteria, Tom said, "I want you to get this close and pass it [ball] back and forth with both your feet. Now get real close. This is when you have to get up on the balls of your feet. We will do this quick for one minute."

Results from field notes indicated that task modifications were rare because succinct demonstrations provided an effective model for drill formation, purpose, and performance expectations, and Tom monitored player performance. Tom further defined task boundaries in response to player performance; in effect, changing the drill as players participated in the drill. One example, from many, indicated that Tom described this Stage 3 task while players demonstrated the task. He stated, "This is a combination we worked on last night. Take-over followed by a wall pass [players start the drill]. Get it so

it is automatic [players repeat drill several times]. Now add pass-back, spin, and receive [changing the drill to a more complicated drill without intervening management]. Do it [pass-back, spin, and receive] slow so you can understand it. "

Appropriate practices. Many appropriate strategies and practices in sport mirrored Tom's practices in physical education (see Table 3). An example of an appropriate practice recommended by NASPE that Tom used was written practice plans that aligned practice sessions with his outcomes. Planning was an essential element in this efficient instructional task system. In an interview Tom stated, "You have a plan and then when you have a plan you have the freedom to deviate. If you have no plan it just doesn't work out." Another appropriate practice was that practice tasks had a major focus on skill and knowledge development. Peter stated in an interview,

> We are just trained...just how we play [in games]. We practice so intense. We only have an 1 1/2 to 2-hour practice. We are always moving. We are hardly ever waiting in line. It is always 100% all the time. And then we go out in the game and we don't know how to play any other way.

Further appropriate practices that Tom used were that he designed practice drills in contextualized situations that maximized participation. Field notes indicated that practice tasks allowed for skill acquisition due to significant amount of well-designed practice trials. Tom maximized participation with a ball for each player, portable goals, and small practice groups. The team was limited to ½ of the soccer field as the field was shared with the girls' soccer team, yet players never waited in line to participate. Skills were situated in game-like contexts (e.g., Games Stages 3, 4) and time used efficiently. Tom stated, "Practice is not how long it is, but the quality. It is how you do it."

Management Task System

Efficient RRE's contributed to the primary learning vector, which were shared among players and coach. Results indicated experienced players were active in translating Tom's expectations to younger teammates (i.e., peer mentoring). In an interview James, a senior, explained, "You just do what everybody else does and you know how to act." Zach a first year varsity player commented, "Just to see how far people stretch it." Players complied with management demands through pressure teammates exerted on each other to conform to their coach's expectations. Field notes indicated that players used desist and praise to hold each other accountable for their coaches expectations.

Tom's trump card was playing time (e.g., "competition for playing time is going to be rough" Tom said at practice in August as he prompted athletes to pick up equipment), although he preferred group pressure to negate this to gain compliance with either instructional or managerial tasks. In an interview Tom stated,

> That is where you hurt them the most in playing time. You know I like to feel and expect if you want to play you will do what you should. Or otherwise don't play, do something else. I want to coach…I don't want to be a parole officer, or a disciplinarian…I like to see the pressure from the group able to take over, so I don't really have to do a whole lot.

Results from field notes indicated Tom established management routines in early season. Routines were established for start/stop, transition, equipment (e.g., "If anyone hits it [ball] over the fence they are to go get it"), and gaining attention. Tom used timed challenges for equipment collection. Players were held accountable for management by warning of aversive control (e.g., running a lap), through rewards (e.g., praise), and ultimately playing time. In an interview Bob stated, "… if he doesn't like what you are

doing he will tell you that too. When he says it, he means it." Field notes indicated once established, efficient management allowed the primary learning vector to flourish and by mid season challenges were not used.

Misbehavior was minimal. In an interview Bob stated, "Coach has eyes for everything he doesn't miss a thing on the field. He may not seem like he sees it- then he will come up to you and say, 'Well, why aren't you doing this?' You cannot slack off." Bob stated,

> It is true we all work so hard everyday and.... He won't yell about it [off-task behavior]. He will just show disappointment. I don't know how he does it but he just does not miss a thing. Everybody knows it. I don't know if it is something he developed over all the years of coaching but he does not miss a thing.

Social Task System

The primary learning vector of activity derived further support from the social task system. Results indicated that (a) mutual respect, (b) having fun, and (c) claiming and accepting leadership roles were social tasks that contributed to the strength of the primary learning vector.

Mutual respect. The overarching principle that guided players' social agenda was their respect for Tom and their teammates. Results from interviews indicated that players' respect for Tom and their desire to earn his respect and praise were catalysts within the robust sport PoA which allowed athletes to be engaged in productive ways with each of the task systems. In an interview Peter explained why players responded so well to Tom, "It is just respect for Mr. Samuelson [Tom]. Everyone just respects him, respects what he does. He is just kind of like a gentleman." In an interview John noted his reasons for respect, "He doesn't come out and just boost your confidence for no reason. If he has a reason, he will say something...That's why you respect him so much because you know

what he is saying, is what he thinks." Bob, another senior further elaborated on his respect for Tom,

> Every year you realize more and more, and you gain more respect for him. I think one of the things that you know is he cares about us. He really does care... You get to know him better in school [as a teacher/coach], which is important because once you really do realize what kind of person he is, it makes you want to play that much harder for him because he is just a good person.

Tom modeled respect and players' behavior toward each other reflected mutual respect. In player interviews players identified getting along with their teammates as a unique feature of this team. Group harmony contributed to the strength of the primary learning vector. Players managed conflict and addressed it directly through quick verbal exchanges and on several occasions with brief shoving matches in the coach's absence. Bob explained, "We get along and if we do fight we get over it the next day." Mike stated. "We are from a small school so everybody knows each other... I guess it is kind of like a family. We all get angry at each other sometimes, but we always manage to collect ourselves." The players' attention to "getting along" allowed the soccer field to become a fertile ground for relationship building. In an interview Ryan stated, "I can go out there and play with a bunch of guys which otherwise I wouldn't [get to] socialize with." In an interview John spoke of strong bonds of friendship and the mutual respect among team members.

> It is different when you are out on the field with your friends. You are like a different person out there. With my friends, I know what they are thinking...we play better because we automatically know where the ball is going. We can just - we don't have to talk to each other really... we know what we are thinking it is kind of weird that way.

The mutual respect among players and Tom, and Tom's reputation as a caring and respected teacher/coach served as a model for player interactions, which supported the robustness of the PoA.

Having fun. Results from student interviews indicated that players equated having fun with competence (i.e., skilled performance), and competing with and against each other in practice. John stated, "It just makes it fun when you go out there, and you are good at it. It just makes things a lot more fun when you are good." Zach, a sophomore, stated, "Going against another team and beating them and outplaying people in practice and stuff. That is what I would call fun." Ryan contrasted fun with seriousness,

> It is fun but at the same time there is a seriousness to it that keeps you determined to do what is right. You don't play only because it is fun you play because you enjoy working together and winning as a team...but it is just so much more than that at the same time.

Players' conception of fun (e.g., skilled performance and competition), which was an aspect of the social task system supported the primary learning vector of activity.

Claiming and accepting leadership roles. Leadership was a one point of incongruence between the players and the coach. Field notes indicated that throughout the season Tom urged players to take an active leadership role (e.g.,"You are the conductor...You need to be developing leadership on the team. You need to see what the problem is and how to solve it") on and off the playing field (e.g., schedule Sunday pick up games). In a final interview Tom said that a real leader never emerged.

In contrast, Bob described his leadership in an interview, "I am a senior. I have been there longer than anyone else and have to take on a completely different role." Several seniors stated in interviews that they felt a responsibility to be a leader. Leadership included providing instruction, speaking up at half time, helping the team to

get along, and directing teammates on the field in games. In an interview Bob spoke proudly of his leadership,

> …giving instruction to some of the players on the team from my perspective rather than just from Coach's [Tom]. When I am out on the field I let people know where the holes are. I will say fill this area and they will do that and listen to me. As a senior, if I see someone doing something wrong, I can give him some positive reinforcement. Tell him positive things and tell him ways he could change it.

Players' resistance to one player as the primary leader was rooted in their conception of what it meant to be a team. The merits of shared leadership were expressed in player interviews. For example, Peter said, "We don't have one [leader], all of our players are equal not just one player. It works out a lot better." Mike explained the importance of shared leadership in and interview, "You shouldn't have like one person that stands out. Last year we had one player that stood out. This year now we are like a team."

Discussion

The present study is an important step in a closer examination of the actual teaching/coaching practices of an exemplary dual role professional. The study is the first to identify a robust PoA in both physical education and sport constructed by the same secondary physical education teacher/coach. In previous research the PoAs in physical education were often found to be casual with a 'no sweat' attitude for students and for teachers (Pagnano, 2002; Siedentop et al., 1994; Supaporn et al., 2003; Ward et al., 1999). In this study the PoA was robust and was focused on learning in physical education and sport.

The present study answers the call made by Hastie and Siedentop (1999) to research settings characterized by strong (i.e., robust) PoAs. The results from this

qualitative case study provide evidence that the robust PoAs in physical education and sport contained substantial student/athlete involvement in the construction and maintenance of the strong primary learning vector of activity. For Tom, an exemplary teacher/coach, the tasks of teaching physical education and coaching sport were focused on learning and the overall PoA was academic, in support of Doyle's work (1977, 1986b). How robust PoAs developed in both physical education and sport can be understood by examining how order was established, and through examining the social participation of learners in a community of practice.

First, order contributed to the robustness of the PoA. Order represents a balance that exists between instruction and management (Doyle, 1986b). In this study order was achieved with the cooperation of students/athletes which depended on their willingness to follow along and participate in the unfolding of class/practice events (Doyle & Carter, 1984). There was an absence of tension among instructional, managerial, and social processes which allowed the primary learning vector to flourish. The primary learning vector's strength in physical education was evident in student's engagement in well-developed soccer tasks, and in sport through their shared success as a team.

Siedentop (1988) suggested that it might take a type of "technical virtuosity" for teachers to maintain order and accommodate the student social task system in environments with robust PoAs. Although Tom could be described as a teacher with technical virtuosity (i.e., highly effective), the task systems reveal how Tom developed and sustained a primary vector devoted to learning and skilled performance. In physical education, as in classrooms, the social task system played a major role (Allen, 1986; Carlson & Hastie, 1997; Hastie & Pickwell, 1996; Supaporn et al., 2003). In this physical

education setting student interactions were often focused on helping each other learn. Tom's expectation that students would learn to "get along and accept others," set the tone for class and, resulted in the willingness of students to work together. Tom stated that his role was to provide opportunities, and then get out of the way, so students could learn. Class interactions were thus focused on learning unlike teacher "banter" seen in a high school physical education setting with a casual PoA (Siedentop et al., 1994).

In sport, the social task system unfolded in a different manner as leadership was the responsibility of the juniors and seniors who had adopted Tom's expectations for behavior. Mutual respect existed among athletes and coach; athletes responded positively to Tom. Rather than athletes acquiescing to his demands as seen in a high school volleyball sport setting (Griffin et al., 1998), athletes adopted Tom's expectations (i.e., beliefs) and actively transmitted these to teammates. Athletes' actions then strengthen the primary learning vector.

In the instructional task system Hastie and Siedentop (1999) found, "Studies in physical education have shown consistently that the instructional task system is low-risk [for students]" (pg. 23). In the present study the instructional task system focused on challenging work in the development of skills and tactics as evidenced through the games stage analysis, appropriate practices analysis, and results from observations of class and practice sessions. For example, previous research in physical education found that students often practiced isolated skills (Stage 1) and then played regulation games (Stage 4) as Games Stages 2 and 3 were often neglected (Rink, 1998), whereas Tom included all stages and students practiced basic soccer skills and tactics.

Several interrelated practices contributed to the robustness of the PoAs. First, Tom paid close attention to individual learners and was able to engage students at an appropriate challenge level which is often not seen in settings with a casual PoA (Hastie & Siedentop, 1999). Second, Tom's management task system included efficient RRE's which allowed him time to focus his attention on individual learners. Third, instructional tasks were often student-initiated which was an efficient use of time and required students/athletes to work together to accomplish tasks. Tom's approach facilitated student engagement in activity without high levels of supervision, which allowed Tom the time to "teach" rather than supervise. Finally, Tom's reputation as a caring and respected teacher/coach, and mutual respect among students/athletes and Tom, shaped the learning environments of physical education and sport.

Second, order and ultimately learning, occurred through legitimate participation in communities of practice situated in physical education and sport (Kirk & Macdonald, 1998). The PoAs in physical education and sport were robust because Tom focused on the needs of his learner's within the specific communities of practice. The major findings from this study involved the fundamental concern of teaching and learning soccer in different social contexts. Two constructs from Lave and Wenger's (1991) theory on situated learning are relevant to the present study and include: (a) the learning process can be understood as an evolving form of membership in a community of practice where enculturation of belief systems is likely (Brown, Collins & Druid, 1989; Langley, 1995); and (b) learning is situated in context, thus the need for opportunities for legitimate peripheral participation.

As a community of practice, sport culture has often been criticized as disconnected from educational values (Gerdy, 2000). Yet, the culture Tom created in sport and physical education provided students/athletes with positive social affiliations, the potential for learning, and enjoyment (Pope & O' Sullivan, 2003). Communities of practice are connected by the tasks they perform and by socially constructed belief systems (Lave & Wenger, 1991). Belief systems are negotiated in a community; however community membership eventually includes a process of enculturation (i.e., assimilation of beliefs and behaviors of the pervasive culture), which occurred in physical education class and sport (Brown, et al., 1989; Langley, 1995). It is interesting to note that as a dual role professional, the cultures Tom created in physical education and sport had similarities which included the importance of connections among team/class members (i.e., group focus), and that all individuals had opportunities to learn (i.e., individual focus). Differences in legitimate participation in communities of practice included limited game time for non-starters, and equal opportunities for participation in physical education. It may be because Tom was a dual role professional and understood the culture of sport and the culture of schools that he constructed a belief system that allowed for legitimate peripheral participation in the context of physical education and sport. Lave & Wenger (1991) suggests that the structure of a community of practice in terms of its social relationships "define the possibilities for learning" (pg. 98). In this physical education and sport context, Tom, students, and athletes developed relationship and constructed environments that engendered learning.

In the present study of an exemplary teacher/coach, Doyle's (1986b) ecological framework provided a theoretical perspective to examine the teaching-learning

environments in physical education and sport. This study was one step in the process to provide an in-depth examination of practices of exemplary physical education teacher/coaches. Further research with exemplary teacher/coaches in different contexts may reveal additional features of the PoA, which could help physical educators and coaches understand how to developed robust learning environments. One benefit of the aforementioned research may be to identify environments (e.g., robust PoAs) that promote physical activity, which are an important focus of physical education and a purported benefit of sport participation.

Table 1. Content Standards in Physical Education/Sample Benchmarks/Assessments

Qualities of a Physically Educated Person	**12th Grade Benchmarks**	**Assessment**
1. Demonstrates competency in many movement forms and proficiency in a few forms.	Participates in a tennis match using all the basic skills, rules, and strategies with some consistency.	Portfolio with various documentation of ability to be proficient in two movement forms.
2. Applies movement concepts and principles to the learning and development of motor skills.	Explains overload principle and designs a personal fitness program where this principle is in operation	Written essay test about exercise principles. Includes questions that require student to apply knowledge in practical situation
3. Exhibits a physically active lifestyle	Participates regularly in physical activities that contribute to the attainment of and maintenance of personal physical activity goals.	Student Journal reporting weekly participation
4. Achieves and maintains a health-enhancing level of physical fitness.	Monitors exercise and other behavior related to health related fitness	Personal fitness assessment based on physical fitness testing. Designs personal fitness goals and reassesses in 3 months.
5. Demonstrates responsible personal and social behavior in physical activity settings	Sets personal goals for activity and works toward their achievement	Teacher and student observational record based on role and contribution to group process
6. Demonstrates understanding and respect for differences among people in physical activity settings	Displays a willingness to experiment with sport and activity of other cultures	Student community multicultural awareness project. Research multicultural options in local community.
7. Understands that physical activity provides opportunities for enjoyment, challenge, self-expression, and social interaction.	Enters competition or voluntary activity	Event Task- student signs up for Big Sister/Brother program. Select and activity to do with "sister" and creates log of this experience.

Table 2. Models of Content Development in Physical Education

Model	Category	Definition	Physical Education Example: Basketball
Rink's (1985) Task Progression	Informing	Information about a new skill or strategy	One-hand shooting, introduced with demo and three critical elements
	Refining	Tasks that improve the quality of a skill, under the same conditions	Spread shooting hand behind ball or turn elbow toward basket
	Extending	Tasks that increase the complexity of the skill, within task progressions	Pivot away, pivot back to square up position, shoot
	Applying	Tasks that use skills and strategies in authentic ways or to assess skill or strategy	2 v1 with one-hand shots
Rink's (1993) Model of Games Stages	Stage 1	Individual skill development; object control	One-hand shooting with hand behind ball
	Stage 2	Skill combinations; working with others in cooperative ways	Receive pass from partner, shoot one-handed
	Stage 3	Basic offensive and defensive strategies	One-on-one game
	Stage 4	Modified game play changes to rules, and boundaries; specialized positions and full-sided games	5 v 5 game
Griffin, Mitchell & Oslin, (1997) Tactical Games Approach	Game Form	Modified version of game exaggerated to present tactical problem	3 v 3, half court, five minute game no dribbling, 3 passes before shot
	Tactical Awareness	Questions posed by teacher to prompt students to problem solve and think critically	What was the goal of the game? What did you do to win the point?
	Skill Execution	As students recognize need for specific skills- teachers present specific skills and cues	Base firm Elbow under ball Extend arm Follow through or flip wrist With partner task five shots from each spot
	Game	Reintroduction to a game with same goals as the original game; solve tactical problems with the skills just practiced	3 v 3, half court, five minute scoring game- score as many field goals as possible

Table 3. Appropriate Practices in High School Physical Education as Recommended by NASPE and Observed in Physical Education and Sport

Appropriate Practices NASPE	Practices Observed Physical Education	Practices Observed Sport
Cooperative Activities- Teach students to work with others to achieve a common goal	Cooperative peer interactions during warm-up and game play; high and low skilled students fully participate	Communication observed among teammates in practice drills and game play
Curricular Decisions- Sequential instruction based on student needs and interests	Soccer unit built on invasion games concepts introduced in the Ultimate Frisbee unit.	Drills selected (e.g., 8 v 8) that meet interests of players
Exercise as Punishment- Teachers promote exercise for its contribution to a healthy lifestyle.	Never used or suggested as a means of punishment in physical education	On one occasion athletes ran 1 lap on the track as a punishment in early season.
Expectations for Student Learning- High expectations and students held accountable for psychomotor, cognitive, and affective learning	Students were closely monitored during class as a form of accountability for learning: written assessment used for evaluation	Athletes were closely monitored and were often prompted when performance or behavior did not meet expectations
Lesson Planning- Aligned with curricular goals and objectives	Lessons were sequentially planned through the four games stages	Explicit links were stated between practice tasks and game performance: Written daily plans
Maximizing Participation- Teachers provide and facilitate sufficient practice trials that allow students to achieve success	Class routines for attendance, equipment distribution, and warm-up maximized time: small groups, ball for every student, drills without lines of students, and limited teacher talk provided time for practice	Use a routine instructional tasks, practice stations, small groups, a ball for every player, limited coach talk
Promoting Respect for Self and Others- Teachers foster self-awareness, leadership, caring for self, and respect for others	Students often seen helping each other in class: students often praised each others' performance	Peers spoke respectfully about each other and their coach during interviews: player leadership was evident as players lead warm-ups and directed field play in games
Selection of Appropriate Learning Activities- Developmentally appropriate activities; and teachers provide several levels of tasks	Tasks were differentiated by Tom in response to performance	Tasks were differentiated by Tom in response to performance
Warm-Up and Fitness Development- Exercises are varied, teachers monitor, and warm-up designed to prepare for activities that follow	Different stations were designed each week; Tom provided ongoing feedback during warm-up; purpose of each task explained to students as they participated in tasks	Tom monitored and provided athletes with feedback related to proper form and purpose during fitness tasks

Table 4. Percentage of Games Stages in the Physical Education and Sport Setting

Games Stage	Physical Education	Sport
Stage 1- Individual Control	31.6%	25.8%
Stage 2-Skill Combinations	17.7%	28.1%
Stage 3-Offense & Defensive Strategy	10.1%	14.1%
Stage 4- Game Play	8.9%	8.6%
Fitness and Warm-up	31.6%	23.4%

Table 5. Percentage of Task Explicitness Across Task Type and Context in a Physical Education and Sport Setting

Task Type	Physical Education Soccer Unit	Sport Practice Soccer
	%	%
Games Stages 1-4		
Explicit	57.4%	22.4%
Partially explicit	3.7%	8.2%
Routine	38.8%	69.4%
Fitness		
Explicit	0%	33.3%
Partially explicit	44%	3.3%
Routine	56%	63.3%
Management		
Explicit	52.6%	28.6%
Partially explicit	0%	0%
Routine	47.3%	71.4%

Figure 1. Continuum of Games

Adapted from Roger Caillois (1961). Man, Play, and Games

Paidia	Agon Competition	*Ludus*
Paidia	Alea Chance	*Ludus*
Paidia	Mimicry Simulation	*Ludus*
Paidia	Ilinx Vertigo	*Ludus*

Paidia _____ Ludus

"Child's Play	Contrivance
Spontaneity	Calculation
Diversion	Subordination to rules
Imagination	Skill, effort, patience
Free play	Sport

Figure 2. Relationship of Task Systems to the Program of Action

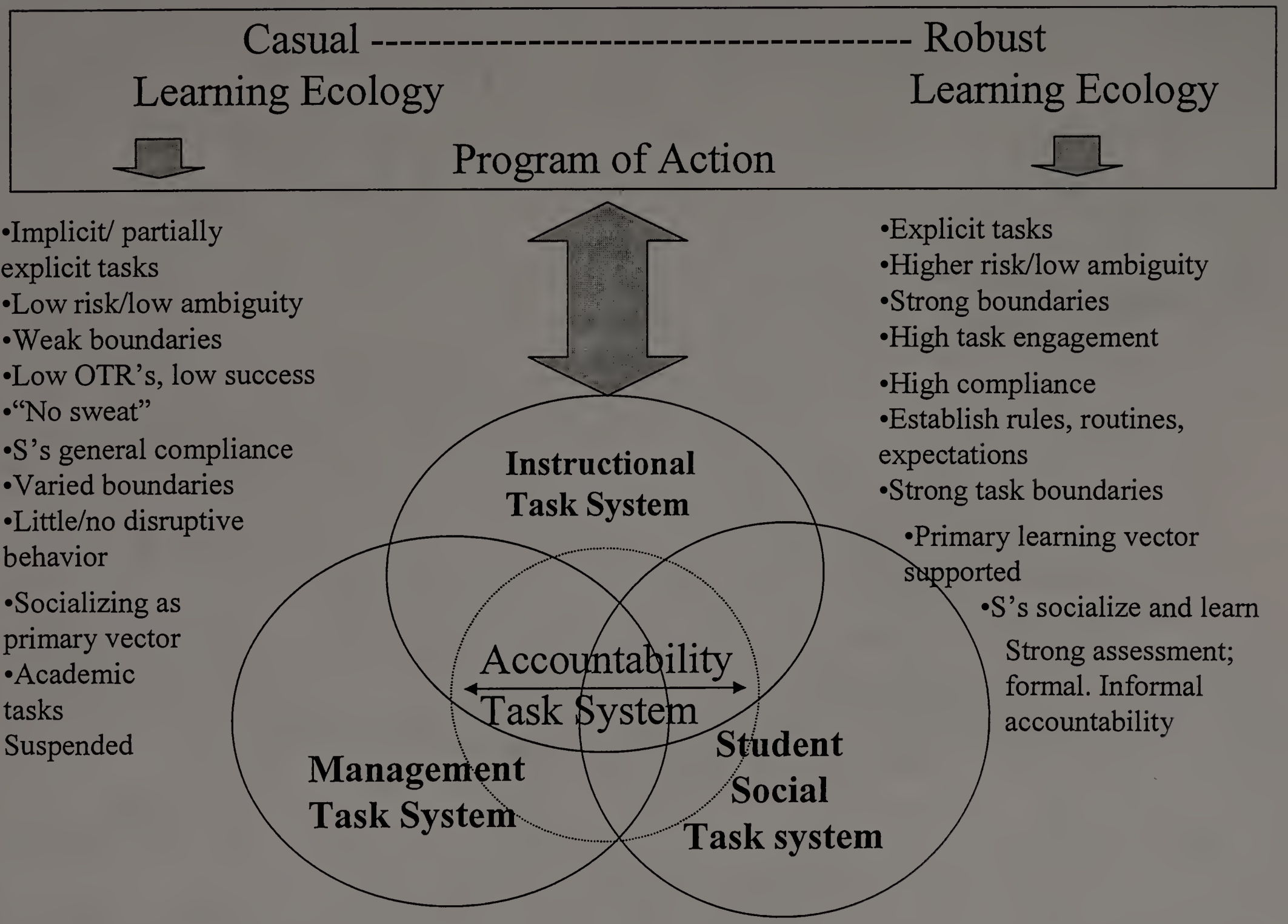

Figure 3. Code Mapping: Three Iterations of Analysis

CODE MAPPING FOR DUAL ROLE RESPONSIBILITIES

RQ#1: How does the teacher/coach experience the roles of teacher and coach?

RQ #2: How do dual role responsibilities influence performance in both roles?

(THIRD ITERATION: APPLICATION TO DATA SET)

Dual roles are similar and compatible which allows the teacher/coach to structure a compatible work life with students/athletes. Teacher/coach is accepted in the community Reverence serves as the foundation for relationships, which are the foundations of learning.

↑

(SECOND ITERATION: PATTERN VARIABLES)

RQ # 1 A

- T & C as similar roles
- Common goals-maximize potential & treat others well
- Effective T & C common attributes

RQ # 1 B

- Supportive community/school culture
- Good use of limited resources

RQ # 2A.

- Dual role facilitates relationship building
- Reverence
- Silence

RQ # 2 B

- "Learning" environment
- Opportunity to grow

↑

(FIRST ITERATION: INITIAL CODES)

1 A. physical education goals
1 A. sport goals
1 A. student/player centered
1 A. effective teacher/coach's always learn
1 A. t/c role-maximize potential
1 A. team building-process orientated
1 A. relations with kids
1 A. leadership-give best as t/c
1 A. coach role
1 A. physical education instruction
1 A. physical education sport differences

1 B. time constraints
1 B. work conditions
1 B. career longevity

1 B. physical education liked
1 B. program support
2 A. work with kids
2 A. respect
2 A. forgiveness
2 A. motivation
2 A. man of few words

2 B. responsibility
2 B. opportunities to make mistakes
2 B. opportunities to learn
2 B. freedom/acceptance in community
2 B. dual role only role he knows
2 B. Student growth-crowning experiences

APPENDIX A

CONSENT FORMS

Teacher/Coach Consent Form

My name is Karen Pagnano. I am a doctoral candidate at the University of Massachusetts Amherst. As part of my doctoral studies, I am conducting a study for my dissertation regarding physical education teacher/coaches. I am interested in observing physical education classes and varsity soccer practice.

I will visit the school from August to November 2002. During the soccer physical education unit, I will videotape the classes you teach for an entire unit. In addition, I will videotape soccer practices throughout the entire season 2-5 days per week. I will also interview you concerning aspects of your life as a teacher/coach and your instruction in physical education and sport practice. These activities will not interfere with your teaching or coaching because I will complete them during your free time (except videotaping the class which needs to be done during regular physical education class and sport practice) at a mutually agreed upon time. I will also interview several students and athletes. The conversations will be tape recorded and later transcribed by me. Neither your name nor any identity information will be used in the report; pseudonyms will be used instead. Your comments will be kept entirely confidential and I will not discuss your comments with other teachers or anyone else in the school. I may use comments in my dissertation as well as professional presentations or publications, but always with pseudonyms.

After reading this form, if you agree to participate, please sign below. After agreeing to participate, you may withdraw from the study at any time. Your signature in the space marked "Signature" below indicates that you have read this form and volunteer to participate.

I will be pleased to answer any questions that you may have with regard to the study. Please call me at home (207) 845-2570 or at the University of Massachusetts (413) 545-2338. My advisor, Dr. Linda Griffin, is also available to answer questions and can be reached at (413) 545-2336.

Participant Signature: _____

Please print name here: _____ Date _____

Researcher Signature: _____ Date _____

Parent Consent Form

To: Parents or guardians of _____

My name is Karen Pagnano. I am a doctoral student at the University of Massachusetts. As part of my doctoral program, I am conducting a study for my dissertation regarding the work of physical education teacher/coaches. I am interested in observing, videotaping, and talking with students about what they learn in the physical education soccer unit or their experience on the varsity soccer team.

I will visit the school from August to November. During the physical education soccer unit I would like to observe your child's class and videotape some lessons. After my observations, I will ask your child to be interviewed. I am requesting your permission to interview your child as well as videotape them in their physical education class. The interview will focus on what they learn in the physical education soccer unit.

During varsity soccer practice I would like to observe and videotape practice. After my observations, I will ask your child to be interviewed. I am requesting your permission to interview your child as well as videotape them in soccer practice. The interview will focus on what they learn during soccer practice.

The actual names of the school, school district, and participants will never be used when I talk or write about this work; pseudonyms will be used instead. I may use comments in my dissertation as well as in professional presentations or publication, but always with pseudonyms. I will not discuss what your child said with other students, teachers or anyone else in the school. Whether your child participates or not will not be connected in any way to your child's grade in physical education or opportunity to play on the varsity soccer team.

I would appreciate your signing this form and having your child return it directly to me in the envelope provided. Participation in this study is voluntary and your child may withdraw from the study at any time.

I will be pleased to answer any questions that you may have with regard to the study. Please call me at home (207) 845-2570 or at the University of Massachusetts (413) 545-2338. My advisor, Dr. Linda Griffin, is also available to answer questions and can be reached at (413) 545-2336.

Sincerely,

/s/ Karen B. Pagnano, Doctoral Candidate,
Physical Education Teacher Education Program
University of Massachusetts- Amherst

Parent Signature:_____

Please print name here:_____ Date_____

Researcher Signature: _____ Date _____

Student/Athlete Consent Form

My name is Karen Pagnano. I am a doctoral candidate at the University of Massachusetts. As part of my doctoral program, I am conducting a study for my dissertation regarding how physical education teacher/coaches teach physical education and coach sport. I am interested in observing, videotaping, and talking with you about what you learn in the physical education soccer unit or your what you learn as a member of the varsity soccer team.

I will visit the school from August to November 2002. During your soccer physical education unit, I will videotape your class. I will also possibly interview you individually concerning the unit and what you learned. During varsity soccer practice I will videotape practices throughout the entire season. I will possibly interview you individually about your participation on the soccer team.

After reading this form, if you agree to participate, please sign below. Our conversations will be tape recorded and transcribed by myself. Neither your name nor any identity information will be used in my report; pseudonyms will be used instead. Your comments will be kept entirely confidential and I will not discuss your comments with other teachers or anyone else in the school.

After agreeing to participate, you may withdraw from the study at any time. Whether you participate or not will not be connected in any way to your grade in physical education or opportunity to play on the varsity soccer team. Your signature in the space marked "Signature" below indicates that you have read this form and agree to volunteer to participate.

I will be pleased to answer any questions that you may have with regard to the study. Please call me at home (207) 832-8136 or speak to me in person at the school.

/s/ Karen Pagnano, Doctoral Candidate
Physical Education Teacher Education Program
University of Massachusetts- Amherst

Participant Signature:_____ (Phone)_____

Please print name: _____ Date_____

Researcher Signature: _____ Date _____

APPENDIX B

INTERVIEW GUIDES

Pre-Observation Interview Teacher/coach

The purpose of this interview is to develop a broad understanding of the participant by reviewing his life course and potential influence on teacher/coach behaviors.

Personal Background

1. Age, family background
2. Personal activity involvement: past and present

Professional background

1. Work experience
2. Degrees held, years teaching
3. Professional involvement, clinics, workshops, conferences, professional library.

Teaching/Coaching Background

1. Reasons for becoming a teacher/coach (How is it that you became a teacher/coach? Why do you continue to teach and coach?)
2. Can you explain your coaching philosophy? How has this developed?
3. What is your teaching philosophy
4. Why are your philosophies similar or different?
5. Potential reasons for staying/leaving your job as a teacher/coach
6. Role models for teaching PE: major influences on your past and present perspective.
7. Role models for coaching
8. Memorable experience as a teacher in physical education ? As a coach?
9. a. Characteristics of effective PE teachers
   b. Characteristics of effective coaches
10. a. Methods of evaluation (student/program) and rationale for this evaluation in PE
    b. Evaluation in sport
11. Curriculum in PE: Nature of activities included. Explain why.
12. What are the necessary components of practice tasks over a season?
13. a. Perceptions of what students want from PE
    b. Perceptions of what students want from sport
14. Similarities and differences of students in class vs. team athletes
15. What are your goals for your students in physical education this year? How will you know that you achieved them?
16. What are your goals for the season and how do you expect to achieve them?
    a. What are barriers to success? What facilitates success?

Present Work Environment

1. Level of satisfaction
2. Conditions that make work (teaching and coaching) difficult (school, community, family life) or easier.
3. Administrative support for teaching and for coaching
4. Questions about observations of team

Post-Observation Interview Teacher/Coach

Program/Unit Goals: Sport and physical education

1. What were your goals in the soccer season this year?
    a. How did you work to achieve these goals?
    b. What were some of the most effective things you did this season to achieve your goals?
    c. What could you do differently if anything next season to make improvements?
2. Tell me about your goals for the soccer unit in physical education.
    a. How did you work to achieve these goals?
    b. What were some of the most effective things you did during this unit?
    c. What would you do differently if anything next time you teach this soccer unit?
3. How are your goals different for sport and physical education? Why are they different?

Dual Role Responsibility

1. Tell me what it is like teaching physical education and coaching sport for you?
    a. How might being a teacher/coach influence your teaching or coaching?
    b. In what ways does being a teacher/coach as opposed to occupying only one role either benefit you or constrain you?
2. Why do you continue to teach and coach?
3. How do you define success in each role?
4. Why do you think you have been able to be successful as a teacher and as a coach?

Order

1. How do you achieve order in your teaching and coaching environments? What does it look like?
    a. How is it the same or different in each environment?
    b. What might cause disorder? What might it look like? How do you cope with this?
2. Why do you order your teaching and coaching environments as described?
3. What cost results for you as a result of achieving an ordered environment?
4. What benefits do you get from an ordered environment?

Social Participation

1. What kinds of relationship do you develop with students in your physical education class?
2. What kinds of relationship do you develop with athletes on your team?
    a. How are these relationships with students and athletes the same?
    b. How are these relationships with students and athletes different?
3. How important is it for students to have fun in sport?
    a. What does fun look like in sport?
4. How important is it for students to have fun in physical education?
    a. What does fun look like in physical education?

Instruction

1. How do you decide on the content for each class and practice session?
    a. How is it the same
    b. Or different?
2. What is good instruction in physical education?

3. What is good instruction in sport?
4. How could you improve instruction in either physical education or sport?

PCK

1. What knowledge do you use to teach soccer in physical education?
    a. How was this developed?
    b. Is this different from knowledge used in coaching soccer? If so, how and why?
2. Give me an example of how teaching an aspect (skill or tactic) would be the same or different in physical education and sport.
    a. If different or the same, why?

Accountability

1. How do you hold students accountable in physical education?
    a. Why is this important ?
2. What do you do to hold students accountable in sport?
    a. How do you do this?
    b. Why?
3. How is accountability different in physical education and sport? The same?
4. How do you measure learning in physical education?
5. How do you measure learning in sport?
    a. Why do you use this kind of measurement?
    b. What do you gain from using this?

Program of Action

1. What influences how you teach and what students learn in physical education?
    a. Are there particulars about your school that influence the teaching/learning process? If so, how?
    b. What are your beliefs about what students should learn in physical education?
        i. How do these beliefs influence what and how you teach?
2. What influences how you coach and what athletes learn in sport?
    a. Are there particulars about the school that influence the coaching/learning process? If so, how?
    b. What are your beliefs about what athletes should learn in sport?
        i. How do these beliefs influence what and how you coach?

General

1. What else can you tell me about your work as a teacher/coach in this school that would help me understand your work?
2. How do you think athletes on your team describe you and their experience in your program?
3. How do you think students in your class describe you and their experience in your program?

Pre-Observation Interview Student/Athlete

The purpose of this interview is to develop a broad understanding of the student/athlete by reviewing his/her sport and physical activity experience to identify potential influence on his/her behaviors in sport or physical education.

Personal Background

1. Family background
2. Personal activity involvement: past and present
3. Recreational interests
4. Future plans/goals for sport or in physical education

Sport or Physical Activity Background

5. Describe in detail any prior sport experience
6. What is valuable about sport? Physical education?

Physical Education Soccer Unit

7. Reasons for taking physical education
8. Would you take physical education if not required?
9. What would you like to learn in this physical education soccer unit?
10. What do you think your teacher wants you to learn?
    a. What do you think about grading in physical education?
11. How do you know how you are supposed to behave in physical education?
12. What happens in class that causes you to do what you are asked to do?
13. How important is it to learn in physical education?
14. How important is it to have fun in physical education?
    a. How would you describe a fun class in physical education?
    b. What could your teacher, you or your classmates do to make physical education more fun?
15. What is your most memorable experience in PE.
16. What do you like most about physical education?
17. What do you like least about physical education?
18. What are some things that Mr. P does that make him a good teacher?
19. What could Mr. P do to make physical education better so that you learn even more?

Sport Practice

20. Why do you play on the soccer team?
21. What reasons would you have for stop playing soccer?
22. What would you like to learn as a member of the soccer team?
23. What do you think your coach wants you to learn?
24. How are you judged in soccer by your coach?
25. Tell me about your teammates?
26. What is it like playing for Mr. P?
27. How do you know how you are supposed to behave on the team?
28. How important is it to have fun in soccer practice?
    a. How would you describe fun in sport?
    b. What could your coach, you or your teammates do to make soccer practice more fun?
29. Memorable experience on the soccer team.

30. What do you like most about playing soccer?
31. What do you like least about playing soccer?
32. What are things that Mr. P does that makes him a good soccer coach?
33. What must happen for you to learn the most and perform the best this season?

Present School Environment

34. Level of satisfaction (adequate equipment, facilities, course offerings?). For soccer specifically?
35. Conditions that make taking physical education or sport practice difficult?
36. Administrative/community support for physical education and sport?

Post-Observation Interview Student/Athlete

Program of Action

1. Describe what you learn in physical education during the soccer unit or in the sport season?
2. Tell me about how it felt to be in that class/team? (What was the program of action?)
3. What things affected what you learned? How? Why?

Instruction

4. What activities or drills did you do that helped you to learn soccer the most? (Look at field notes to ask about specific tasks)
    a. What activities did you do that helped you to learn skills?
    b. Strategies and tactics (i.e., plays)?
    c. Teamwork?
5. What drills/activities were least effective?
6. What specific things would your teacher/coach do to help you learn (individual attention?)
7. What would you do differently if you were to teach or coach this activity to your class or team?

Management

8. What rules and routines were you expected to follow? Why?
9. Would you make any changes in rules or routines?

Social

10. Was your physical education soccer unit or soccer season fun? If, so why or why not?
11. What do you and your classmates/teammates do in class to make it as enjoyable as possible?
12. What keeps you from having fun?

Accountability

13. What things did Mr. S require that you do during the unit or season in sport/PE?
14. How did Mr. P get you to do these things?
15. What was your grade in physical education unit?
16. How were you graded?
17. How did your coach determine starting/playing time?
18. Do you think the grading system /playing time is fair? Why? Why not? Is it fair for just you or is it fair for all players or students?

General

19. What did you like most/least about the unit/season?
20. How effective was your teacher/coach? Why? Give me some examples.
21. What else can you tell me about playing soccer on the team or in physical education that will help me understand what it is like to be on the team or in the class from your perspective?

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